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ABSTRACT

Designed to help the teacher introduce study skills to students in the fifth, sixth, and seventh grades, this teacher's guide describes a series of 14 activity-oriented units, most of which require one period of class time. The units in the guide focus on such topics as (1) learning to listen, (2) tuning into directions, (3) putting ideas together, (4) getting the timing down, (5) understanding the sequence of events, (6) improving vocabulary, (7) using a dictionary, (8) building sentences, (9) reading for meaning, (10) taking notes (mapping and outlining), (11) listening and taking notes, (12) putting a book together, (13) solving problems, and (14) studying and test taking. In addition, the guide offers a comprehensive overview of study skills, directions for the classroom use of the student text, and practical suggestions for further study skills instruction. (HOD)

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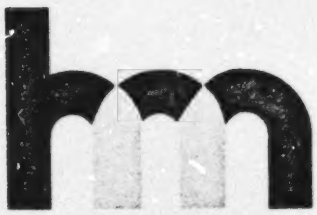

study skills program Level I

TEACHER'S GUIDE

CS 007 901

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STUDY SKILLS PROGRAM
Level I

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TABLE OF CONTENTS

	AN OVERVIEW OF STUDY SKILLS	v
	INTRODUCTION TO THE hm STUDY SKILLS PROGRAM	1
I.	INTRODUCTION: WAYS TO LISTEN	6
II.	TUNING INTO DIRECTIONS	14
III.	PUTTING IDEAS TOGETHER	17
IV.	GETTING THE TIMING DOWN	20
V.	A MATTER OF TIME	23
VI.	IMPROVING YOUR VOCABULARY	25
VII.	USING A DICTIONARY	28
VIII.	BUILDING SENTENCES	31
IX.	READING FOR MEANING	36
X.	TAKING NOTES: MAPPING AND OUTLINING	41
XI.	LISTENING AND TAKING NOTES	44
XII.	PUTTING A BOOK TOGETHER	46
XIII.	SOLVE IT YOURSELF	51
XIV.	STUDYING AND TEST TAKING	54

An Overview of Study Skills

During the past decade, many educators have defined basic skills primarily in terms of communication and computation skills. Study skills, though often neglected or ignored, are also basic skills. These skills for learning are at the core of educative process.

WHAT ARE STUDY SKILLS?

Study skills are learned abilities for acquiring knowledge or competence. The table of contents of a study skills handbook or text usually includes, among others, the following skill areas: listening; textbook reading; note taking; planning your time; study behavior and environment; vocabulary skills; test taking. These skills and others which fit into the category of study skills directly relate to many of the activities in which students are engaged while they are in school or doing schoolwork.

A broader definition of study skills or learning skills views them as processes for learning. When one learns a study skill, one is learning more than a specific technique. One is learning a way of problem solving, a method which can be used in any relevant context. One is also learning more about how to learn effectively and how to be in charge of one's own learning. It is this perception of study skills as transferable processes for learning which reveals the critical importance of these skills.

A review of nearly 80 years of study skills literature indicates that, at least throughout this century, the nature of study skills has remained relatively constant. Study skills in 1940 were much like those in 1920, in 1960, and even in 1980. There have been variations of emphasis as well as some genuinely innovative developments over the years, but the strongest impression is one of continuity.

This continuity is important to keep in mind in view of the trendy nature of American education which often seems to produce a good deal of ill-considered change. Even though an element of the curriculum is found to be useful, we still often choose to eliminate or ignore it whenever the next new trend appears. Because study skills have been relatively impervious to change, they have been periodically discarded over the years, only to be rediscovered much later. This pendulum effect has had damaging results because the importance of learning how to learn never diminishes.

HOW HAVE STUDY SKILLS BEEN TAUGHT?

The most common approach to study skills instruction during the first few decades of this century was essentially the preaching of morality. This approach related good study skills to what was called "high morals," indicating that students who displayed the correct moral values would be the ones with good study skills.

This moralistic approach to the teaching of study skills peaked before World War II, at least if the literature is an accurate guide, and was replaced by a focus on techniques and formulae. The most famous of these formulaic methods is SQ3R, an excellent method for reading a textbook which was developed by F.P. Robinson.

The chief characteristic of a formulaic approach to study skills is the learning of a specific series of behaviors. For example, using SQ3R, one learns to survey, question, read, recite, and review. Unfortunately the use of such formulae often descends to the level of gimmickry. Students are taught to use a particular technique as if it involved an act of magic; that is, something beyond their active and conscious participation, comprehension, and control. Although formulaic methods attempt to create understanding and involvement in the student, the mere fact of their use guarantees neither of these necessary outcomes.

While formulaic techniques can be very useful, they must be employed within a framework for the teaching of study skills which engages the student not only in learning a particular skill but also in learning about what happens within oneself when one learns and uses a study skill. It is important for the student to learn why a skill works and why it is valuable as he or she is learning how to do it. A central part of this learning involves the student's initiative in the exercise of judgment and choice.

A third method of teaching study skills is the handbook approach. While this method claims to understand and appreciate the value of study skills, it argues that no class time is available for study skills instruction. Thus, this approach relies on the handbook to elicit involvement and learning. Students are given written descriptions of various study skills and are expected somehow to translate verbal abstractions into behavior. A few students can and will make this leap, but the vast majority cannot, because they lack the motivation, self-discipline, and conceptual ability required to learn study skills independently. Though not uncommon, the handbook approach is not particularly helpful. Although it is an effort to address the need for teaching study skills, its use results in a minimum of learning while simultaneously creating frustration and resistance in the student.

STATUS OF STUDY SKILLS TEACHING

The overview of study skills instruction presented below is primarily drawn from two sources: the authors' observation in six eastern states over the past nine years, and an extensive national survey conducted by one of their colleagues. While this overview is a generalization to which specific contradictions can certainly be cited, the larger picture which it offers seems accurate.

During the past several years, the "back to basics" movement has led to a greater emphasis on basic skills during the middle school years. However, this movement has not addressed the lack of effective study skills instruction in most elementary, middle, and junior high school curricula. Despite the renewed concern for skills education, the widespread failure to regard study skills as basic skills has resulted in a continuing lack of emphasis on study skills instruction.

Another problem involves the nature of study skills teaching which does take place. Though many teachers do include some study skills instruction in their curricula, they tend to do so with a lack of focus on precisely what skills they wish to teach and on how their students' learning is going to occur. This absence of focus results in a lack of coordination of their efforts towards the teaching of study skills in any given class over the course of the year. Rather than a well-planned, highly coordinated effort, what often results is haphazard collection of insufficiently related lessons.

A third shortcoming is the lack of coordination of efforts in teaching study skills among teachers of different subjects at the same grade level. While there is some uncertainty and conflict in regard to the responsibility for teaching other basic skills, this confusion is particularly intense in regard to study skills. For example, is the English teacher the only one who is responsible for teaching the various communication skills which are also study skills? Or should every teacher deal with these in some way relevant to his or her own subject? The reality is that schools often fail to delineate the areas of responsibility for the teaching of study skills. It is no wonder that confusion arises among teachers; ultimately, though, it is the students who suffer most.

A fourth problem is an extension of the previous one: not only do schools fail to coordinate and organize the teaching of study skills in any particular grade, but the same phenomenon also takes place on a system-wide basis throughout a student's academic career. Teachers often assume that somebody else has taught certain skills to their students or will teach them later on. But often no one ever gets around to teaching them because there is no clear assignment of responsibility.

HOW DO WE TEACH STUDY SKILLS?

People learn skills through processes of repeated trial and error. One key to effective study skills teaching, then, is providing the student with sufficient opportunity for practice of the skills to be learned. Of course, there is an inevitable tension between providing students with trial and error practice of a new study skill and helping students to maintain their interest in learning the skill in the face of the necessary repetition. While this tension cannot be removed, it can be minimized by acknowledging the tension as a natural part of learning something new, and through the use of varied and imaginative instructional design.

A second key to study skills teaching is the recognition that learning a study skill requires the learner to err before he or she can succeed. We learn skills by trying to use a new skill, making mistakes, identifying our mistakes and learning from them, and then correcting our mistakes. This understanding creates several responsibilities for the teacher:

1. The teacher provides a space within the learning process where the student can try out a new skill, experience a good deal of error, but not feel that he or she has failed or is a failure.
2. The teacher provides usable feedback to the student about the effectiveness of the student's use of the new study skill.
3. The teacher rewards the student for what he or she has done well in using the new study skill. With such recognition, the student experiences success in the learning process and will be more motivated to continue the development of mastery in the new study skill. Recognition involves the acknowledgment of the effort to risk in the face of possible failure.

In addition to these two key understandings, a program of effective study skills instruction would be based on the following underlying values:

1. Study skills need to be defined as processes for learning.
2. Study skills need to be included within the cluster of basic skills.
3. An important part of learning study skills involves learning more about how one learns. Thus, instruction in study skills engages the student in an active participation in his or her own learning. The student is encouraged and provided with the opportunity to develop the ability to exercise his or her own judgment in regard to the learning and use of study skills.
4. Learning by doing is the best way to learn study skills.
5. A considerable part of study skills instruction ought to take place during class time. Such instruction should also be integrated with the regular curriculum of the course.
6. The learning of study skills offers a transfer effect; a skill learned in relation to one subject can be applied to any other relevant context.
7. The work of various developmental psychologists has shown us that there is a continuum of cognitive development throughout the years of childhood and adolescence, and that people are only able to deal successfully with learning tasks which are appropriate for their level of development. It is crucial to relate this insight to the teaching of study skills and to ask a student to learn only what is within the realm of his or her cognitive ability at that level of development.

WHAT IS THE hm STUDY SKILLS PROGRAM (Level I)?

The hm Study Skills Program (Level I) is designed for use in grades 5-7 (Level II of the hm Program for grades 8-10 is also available) and includes three components:

1. The student text of the hm Program provides 14 activity oriented units, most of which are designed to require one period of class time (a few may require two periods). The Program helps the classroom teacher to integrate study skills instruction with the curriculum of his or her course. The units in the hm Program are:

   I. Introduction; Ways To Listen
   II. Tuning Into Directions
   III. Putting Ideas Together
   IV. Getting The Timing Down
   V. A Matter Of Time
   VI. Improving Your Vocabulary
   VII. Using A Dictionary
   VIII. Building Sentences
   IX. Reading For Meaning
   X. Taking Notes: Mapping And Outlining
   XI. Listening And Taking Notes
   XII. Putting A Book Together
   XIII. Solve It Yourself
   XIV. Studying And Test Taking

2. The teacher's guide of the hm Program offers a comprehensive overview of study skills, directions for the classroom use of the student text, and practical suggestions for further study skills instruction for both the experienced and inexperienced teacher.

3. A Workshop Kit is available to assess the status of study skills in your school and provide teacher training for your staff in regard to study skills instruction.

The **hm Study Skills Program** (Level I) offers the teacher a valuable resource for the inclusion of effective study skills instruction in his or her class or course. It also provides the teacher with a useful tool for helping students make the demanding transition from elementary to secondary school.

HOW CAN YOU USE THE hm STUDY SKILLS PROGRAM IN YOUR SCHOOL?

The **hm Study Skills Program** is designed to be taught by a teacher in any individual classroom. You may also want to use the Program as a tool for organizing effective study skills instruction throughout your school. We know of a number of schools where the administration and faculty have organized the responsibility for teaching study skills and have used the hm Program as an aid in this process.

Introduction to the hm Study Skills Program

Dear Colleague:

The hm Study Skills Program is designed to provide you with a valuable resource for the teaching of study skills. Please take a few minutes to read the introduction to the Teacher's Guide so that you can gain a sense of the purposes and values, the means and ends, and the capacities and limitations of the hm Study Skills Program.

INTRODUCTION

1. *Study Skills: what are they?*

Study is acquiring knowledge or competence. A skill is a learned or developed ability. Study skills, then, are the learned abilities which one has for the purpose of acquiring knowledge or competence. A look at the listing of units in the hm Program will give you examples of important study skills.

In this literal sense, study skills involve specific behaviors which can be objectively described and measured. For example, can a student attend to a set of directions and follow them accurately? Can a student plan the use of his or her study time and follow that schedule? Can a student read a section of text and identify the main ideas and supporting details? However, there is also a larger, more profound definition of study skills. In this sense, study skills or learning skills are processes for learning. When one learns a study skill, one is learning more than a specific technique. One is learning a way of problem solving, a method which can be used in any relevant context. One is also learning more about how to learn effectively. It is this perception of study skills which reveals their central role within the process of schooling.

2. *Study skills and basic skills*

As educators have initiated and heeded the call "back to basics" during the past decade, they have usually defined basic skills as those dealing only with communication and computation. Given our understanding of study skills as processes for learning, we of The Study Skills Group believe that study skills and learning skills must be included within the definition of "basics." The primary motivation behind the creation of the *hm Study Skills Program* rests in this belief. We hope that our work will help to clarify the importance of study skills within the schooling process, to focus teachers' attention on the role and nature of study skills, and to help teachers address the need for the teaching of study skills in an organized way.

3. *The hm Study Skills Program (Level I)*

The *hm Study Skills Program* (Level I) is designed to provide *an introduction to study skills* for all 5th, 6th, and 7th grade students through a series of fourteen activity-oriented units. Most of the units will require one period of class time; a few will need two periods. The *hm Study Skills Program* (Level I) is *not* remedial in character. Rather, it is designed to assist in the development of necessary study skills in students at most levels of competence, and to reinforce already existing skills.

The hm Program is structured on the assumption that activity-oriented lessons are the most effective instructional strategy for the teaching of study skills; more succinctly, that "learning by doing" is the best way to master study skills.

The Program is deliberately designed to address a wide range of student needs:

1. For the student who has little sense of a particular skill, it provides an introduction to the skill.
2. For the student who is ready to acquire a skill, it provides a learning experience.
3. For the student who has mastered a skill, participation offers review and reinforcement.

Thus, the Program's exercises allow for the participation of students with a wide range of skills and promote learning on various levels of competence.

The hm Program (Level I) will provide you with a focus on the nature and value of study skills. It will give you fourteen initial instructional units dealing with a variety of crucial skills. In addition, it will offer you suggestions for consequent instruction related to the various skills.

The *hm Study Skills Program* (Level I) will function as a workbook for classroom use. After the completion of the last unit, each student should be allowed to keep his or her Program so it can serve as a resource or handbook throughout the year. Or, Programs may be reused as needed.

The hm Program (Level I) for 5th, 6th, and 7th graders is the second in the series which also includes the *hm Study Skills Program* (Level II) for 8th, 9th, and 10th graders. Forthcoming are the following additions to the series:

The *hm College Study Skills Program*
for high school seniors and college freshmen

The *hm Mathematics Study Skills Program*
for pre-Algebra students

The Spanish language edition of the *hm Study Skills Program* (Level I)

4. *The hm Study Skills Program (Level I): Outline of Units*

I. Introduction; Ways To Listen
II. Tuning Into Directions
III. Putting Ideas Together
IV. Getting The Timing Down
V. A Matter Of Time
VI. Improving Your Vocabulary
VII. Using A Dictionary
VIII. Building Sentences
IX. Reading For Meaning
X. Taking Notes: Mapping And Outlining
XI. Listening And Taking Notes
XII. Putting A Book Together
XIII. Solve It Yourself
XIV. Studying And Test Taking

TEACHING THE hm STUDY SKILLS PROGRAM: A DISCUSSION OF MEANS AND ENDS

1. People learn skills through processes of repeated trial and error. One key to study skills teaching, then, is providing the student with sufficient opportunity for practice of the skill to be learned. The *hm Study Skills Program* includes only one practice of each skill which it introduces. If your students are to master the various study skills presented by this Program, it is essential that you provide them with structured opportunities for practice of the various skills. For example, in our classroom testing of the hm Program, we have seen teachers select four or five study skills which they judged to be most important and focus on these in the weeks and months after their initial use of the whole Program.

   Of course, there is an inevitable tension between providing your students with trial and error practice of a new study skill and helping your students to maintain their interest in learning the skill in the face of the necessary repetition. While this tension cannot be willed away, we are confident that you can minimize it by using variation and imagination in your instructional design. For example, if your students are learning to take notes, let them practice their skills in a wide variety of contexts and for many different purposes.

2. A second key to study skills teaching is the recognition that learning a study skill requires the learner to err before he or she can succeed. We learn skills by trying to use a new skill, making mistakes, identifying and learning from our mistakes, and then correcting them. This understanding creates several responsibilities for the teacher:

   a. The teacher provides a space within the learning process where the student can try out a new skill, experience a good deal of error, but not feel that he or she has failed or is a failure.

   b. The teacher provides usable feedback to the student about the effectiveness of the student's use of the new study skill.

   c. The teacher rewards the student for what he or she has done well in using the new study skill. With such recognition, the student experiences success in the learning process and will be more motivated to continue the development of mastery in the new study skill.

3. We strongly recommend that the *hm Study Skills Program* be taught within the context of an academic course rather than in a homeroom or mini-course setting. Only in a regular academic classroom can the teacher of the hm Program integrate the various study skills with the curriculum of his or her course and show the student the immediate and long-term value of mastering the various skills.

4. The study skills presented in the hm Program are ones which are useful in almost any academic endeavor. Thus, we believe that the *hm Study Skills Program* may be successfully taught within the context of any academic subject with the exception, perhaps, of mathematics. (The *hm Mathematics Study Skills Program* is being developed to provide a study skills resource for the mathematics classroom.) In our classroom testing, we have observed the effective use of the Level I *hm Study Skills Program* in self-contained classes and in Social Studies, English, Reading, and Science classes.

5. Our classroom testing of the *hm Study Skills Program* (Level I) has informed us that there is no single organization or pacing for the teaching of the units which we can recommend. Rather, a number of structures and pacings have been used with success. These include the following:

   a. Within a subject area or self-contained class, one unit per week over a fourteen-week period.

   b. Within a subject area or self-contained class, two units per week over a seven-week period.

   c. A division of the instructional load among different subject area teachers, with each one teaching some part of the Program.

   We suggest that you adopt an instructional strategy which is suited to your own school's strengths and needs. We strongly recommend that you design a strategy which will provide opportunity for the immediate application and reinforcement of the various study skills which the student can learn through this Program.

6. In creating the hm Program, we included a content for each unit, with the exception of Unit XI. We have done this to make the Program more immediately useful to classroom teachers. However, you may wish to replace our content with that of your course. In our classroom testing, we have observed a number of teachers who have integrated a unit or several into their curricula. You may wish to do this as well and accomplish two of your instructional objectives simultaneously.

7. The *hm Study Skills Program* (Level I) is designed to be taught by a teacher in a classroom setting. It is not programmed material which the student can work through by himself or herself, though some of its units may be used on an individual basis.

8. The *hm Study Skills Program* (Level I) attempts to incorporate as much student activity as possible, including individual, small group, and whole class exercises. This emphasis flows from our convictions that people learn skills best by doing.

9. Given the grade-oriented reality of most schools, we suggest that the student's involvement with the hm Program be graded in some fair and concrete manner. We propose a *mastery* basis for this grading, though one which keeps in mind the process of how skills are learned, namely only through repeated practice overtime, and sets reasonable levels of expected mastery. We also suggest that you inform your students about how their work with the hm Program will be evaluated at the very beginning of their use of the Program.

10. It's important to note that the hm Program (Level I) can also serve as a diagnostic tool for your use. An inspection of your students' working of the various units will provide you with specific information about their abilities in terms of study skills. It will show you clearly what they already know and on what you need to focus your instructional attention.

11. We strongly recommend that you provide your students with an overview concerning the values and purposes of study skills both in your classroom and throughout their lives.

SUGGESTIONS FOR TEACHING THE hm STUDY SKILLS PROGRAM (LEVEL I)

Suggested Directions

1. The Teacher's Guide offers "Suggested Directions" for the teaching of each unit in the Program. Our classroom testing has shown these methods to be useful. Of course, we invite you to adapt them in ways which you see fit.
2. We suggest that you examine both the Program and the Teacher's Guide carefully prior to your teaching of the various units.
3. The Program offers content with which the students may practice the various skills. As noted above, we invite you to substitute the content of your course in its place if you find this desirable.
4. THE CONTENT INCLUDED IN THE PROGRAM IS COMPLETE WITH *ONE EXCEPTION:*

   For Unit XI (pages 64-69 in the Student Text) Exercises I and II ask you to prepare and deliver a short talk and to lead a short class discussion. The reason we ask you to participate in this way is discussed on page 44 of the Teacher's Guide.

Suggested Times

1. While creating the hm Program, we have been acutely aware that teachers of the 5th, 6th, and 7th grades work within a variety of time structures: self-contained classrooms; 40-50 minute periods for subject area classes; team-teaching double periods; and so on. To make this Program as useful as possible, we have structured the units to accommodate the teacher who has his or her class for only one period at a time. Of course, the Program can easily be used in situations where you have more time with your students.
2. Each section of the "Suggested Directions" in the Teacher's Guide includes suggested "approximate times" for the various parts of the units. We caution you that these times are approximates based on a variety of classroom testing of the materials. Each unit is designed to fit into a single period, with three exceptions:

   a. Unit VIII (BUILDING SENTENCES) will require two periods of class time.

   b. Unit IX (READING FOR MEANING) *may* require two periods of class time.

   c. Unit XII (PUTTING A BOOK TOGETHER) will require two periods of class time.

   However, our classroom testing experience has shown us that the wide variation in teacher style results in an equally wide variation in the pacing of instruction. We strongly suggest that you examine the Program units carefully and gauge your planning of instructional time according to your knowledge of how things actually work in your classroom.

Unit Summaries

1. Each unit includes a summary as its final page. While the use of the summaries has not been formally integrated into the suggested directions for instruction, we suggest that you bring the summaries to the attention of your students.

AN IMPORTANT OMISSION: USING SCHOOL RESOURCES

Throughout our development of the hm Program, we considered the inclusion of units related to the student's use of school resources. In our view, two key resources are (1) the school library or media center, and (2) the guidance and special services personnel. We decided not to include units of this sort, because we could not direct them specifically to the situation in *your* school.

UNIT I: WAYS TO LISTEN

Listening skills are often overlooked during the middle school years, yet these skills are crucial to the achievement of academic success.

This unit is designed to provide your students with a learning experience about the effectiveness of their own listening skills. It also gives you an instrument with which you can gain a sense of (1) how well your students listen to you and (2) how well your students listen to each other.

Before you teach this unit, we strongly suggest that you examine it carefully.

A Note About Teaching Methods

In this unit, as with others in the Program, we have recommended that you organize your students into small work groups for the following reasons:

A. Working in small groups on a common task allows students to learn skills from interacting with each other.

B. Small group processes offer an effective method of engaging students in an activity. Such processes provide active participation for each and every student. Thus, small group processes both enhance motivation for learning and increase interest in the content of the lesson.

C. Small group instruction frees the teacher to become an observer in a more intimate way and to ascertain more accurately the level of instruction which would most benefit the students.

For those teachers who are not familiar with small group processes, we offer the following practical suggestions:

1. If you haven't done much small group work with your class, you may want to assign the initial groups. Try to create a healthy balance in each group between students with social skills and students with task skills.
2. Make it very clear to your students as to how and where the groups will be situated.
3. The entire class should move into groups at the same time. This will help to minimize confusion.
4. Groups tend to work more efficiently if they are functioning within time limitations. Let your students know how much time they have to complete a given task.
5. If you haven't done much group work, structure the first small group lessons with clear and specific task goals. After the groups have completed their work, allow time to examine how well each group worked towards the accomplishment of its goals.
6. Experiment with small group work! Eventually you'll find the balance that your class needs for effective small group processes.

Of course, individual work is of critical importance to the learning of skills. When a skill is introduced in a group setting, it becomes crucial to provide for individual work with that skill through homework and/or other class activities.

If you would like to examine the small group learning process in greater detail, we suggest that you look at *Learning Together and Alone: Cooperation, Competition, and Individualization,* by David W. Johnson and Roger T. Johnson (Englewood Cliffs, New Jersey: Prentice-Hall, 1975).

Suggested Directions for Unit I

1. Give your students a brief overview of the Study Skills Program (what it will cover; what value you see in it; how it will be evaluated; how you plan to use it in your class; etc.). Then, pass out the Student Texts and read the "Introduction" (page 1 in the Student Text) aloud to your students, or have a student or students read it aloud. Discuss briefly.

   Approximate time: *5-10 minutes*

2. Two different ways of organizing the activity of this unit, "The Listening Game," will be offered. Read through both sets of directions carefully and select the method which you find more appropriate for your class.

First Alternative

1. Before class, make one copy of each *situation* (see pages 9-12 in the Teacher's Guide) on a separate piece of paper. At this time it would be helpful to you to examine all of the *situations*.

2. At the beginning of the period, divide the class into small groups of 4-6 students. Have the members of each group sit together.

3. Read the directions to "The Listening Game" (page 2 in the Student Text) aloud to your class. Then, select one student in each group to be a *reader*. Ask the members of the class who are not *readers* to read the "Tips for Good Listeners" (page 2 in the Student Text). While they are doing this, gather the *readers* together. Hand a different *situation* to each group *reader* and explain to the *readers* that they will have the following tasks:

   a. Read your *situation* aloud to your group only *once*. Read clearly and slowly. Do not repeat anything. Also, do not answer any questions.

   b. When you have finished reading, stay with your group. You may listen to their discussion, but you cannot participate in it.

   c. When the groups have finished their work, switch groups with another *reader*. Now you become a *reporter*. Listen carefully to what the group members tell you about their *situations*. Remember as much as you can, but do not take notes. Be prepared to tell the entire class what your group has told you.

   Ask the *readers* to read over their *situations* to themselves.

   Approximate time: *10 minutes*

4. When your students have finished reading the "Tips," answer any questions; tell your students that you will talk about these "Tips" in more detail after they have played "The Listening Game." Now explain to the group members that each group's *reader* will read the story to them. Once the *reader* has finished reading, the members of the group must work to come to an agreement about what they have heard. Tell them that they will have only seven minutes to reach an agreement.

   Have the *readers* read the *situations*. Then, give the groups seven minutes to prepare. Have the *readers* switch groups and become *reporters* after the seven minutes are over. Then, have the groups tell the *reporters* what they heard. Tell the *reporters* that they cannot ask any questions.

   15-20 minutes

5. Ask one *reporter* to tell the class what his or her group has presented to him or her. Then, read the original version of that *situation* aloud. Ask your students to suggest one or two ways in which the *situation* has been changed; list these on the board. Repeat the same process with other *reporters* and *situations*. Then, discuss the ways in which the *situations* have been changed through the listening process.

   15-20 minutes

6. Go over the "Tips for Good Listeners" and discuss each one. Ask your students if they can relate these "Tips" to the kind of listening they did for "The Listening Game."

   5-10 minutes

Second Alternative

1. Before class, make enough copies of *Situation B* for half of your class; do the same with *Situation C*.
2. Read the directions to "The Listening Game" (page 1 in the Student Text) aloud to your class. Then, read *Situation A* aloud. Have two or three students give their versions of what they have heard; then, read the original *situation* again and discuss how the *situation* is changed through the listening process.
   Approximate time: *10-15 minutes*
3. Divide the class into pairs. Pass out *Situation B* to one member of each pair, and *Situation C* to the other member. Have the students with *Situation B* read it aloud to their partners; then have the listeners tell the readers what they have heard. Ask a student to read the original *situation* aloud to the class, and discuss the students' experience of how the *situation* was changed through the listening process.

   10-15 minutes

4. Repeat the same process with *Situation C*, having the students reverse roles.

   10 minutes

5. Go over the "Tips for Good Listeners" (page 1 in the Student Text) and discuss each one briefly. Ask your students if they can relate these "Tips" to the kind of listening they did for "The Listening Game."

   10 minutes

SITUATION A

We are all witnesses to an automobile accident. Listen carefully as I read to you what we have all "seen."

We were all standing at the intersection of South Street and East Avenue in Turner's Falls, Missouri. It was late in the morning. A blue sedan, carrying only a driver, stopped, signalled and made a right turn from South Street onto East Avenue. A four-axled truck raced into the intersection on East Avenue without bothering to obey the stop sign.

The truck caught the side of the sedan's front bumper. The sedan spun into a fire hydrant, breaking the hydrant in two. A flow of water came rushing out from the hydrant stump, and the neighborhood children were soon splashing in the water on this hot July day.

SITUATION B

We are all witnesses to a bank robbery. Listen carefully as I read to you what we have all "seen."

At 1:00 PM we were standing in the lobby of the Second National Bank in Columbus, Ohio. Three persons dressed in clown outfits with faces painted white skipped into the bank. Each wore the same costume, except that one had a red hat, another a green one, and the third, a yellow one.

The clown with the red hat went to the teller at the last window while the other two clowns juggled oranges in the middle of the bank. Then the clown with the yellow hat began to shout advertisements for the circus. The clown with the green hat went from person to person selling tickets until the bank manager came out to chase the two of them away. By the time he got both clowns out through the revolving doors, the clown in the red hat had also disappeared.

A minute later the bank manager walked to the last window. He found that the teller had fainted and that $5,000 was missing from her drawer.

SITUATION C

We are all witnesses to a rescue on a beach. Listen carefully as I read to you what we have all "seen."

We were all standing on the edge of the beach on Pelican Lake which is located just outside of Silver Springs, Georgia. It was just after noon because we had heard the noon bell from the fire station only a few minutes before.

A boy of about ten years was fishing from a rowboat. His line jerked fiercely, and he stood up to reel in what might be a big catch. As he started to pull it in, a motorboat towing a water skier roared by. The skier's wake rolled up against the rowboat and knocked the boy into the water.

A big Labrador Retriever swam out into the lake and grabbed the boy by the collar of his shirt. Both boy and dog made it safely back to shore, and the motorboat vanished around the bend in the lake.

SITUATION D

We are all witnesses to a tornado. Listen carefully as I read to you what we have all "seen."

August 29th. It was a very hot and humid day in Wellcove, Texas. We were sitting on the front porch of our house trying to cool off. It was already late in the afternoon when we noticed the sky turning a bright yellow. A few minutes later we saw funnel shaped clouds coming in from the west.

We knew that they were tornado clouds, so we ran into the basement for safety. Through the basement window, we saw a pick-up truck lifted up by the wind and set down on top of Newberry's Department Store. On the other side of our street, all of the windows were broken.

Later we found out that some of the stores also had their insides knocked out, like the hardware store. But others weren't damaged much at all. In the ice cream parlor, the cones were stacked in neat piles on the counter just behind the broken windows. On our side of the street, nothing was touched at all, except for a barber pole that was knocked over.

SITUATION E

We are all witnesses to a poodle kidnapping. Listen carefully as I read to you what we have all "seen."

April 15th. It was a warm day in San Francisco. We were all waiting in the TWA boarding lounge at the airport. Our jet was scheduled to leave for New York in fifteen minutes.

A gray miniature poodle with pink bows tied on its head was sitting on the lap of a well-dressed woman. Many people had stopped to pat the little dog on the head and ask the woman how it was going to travel aboard the airplane. She was explaining the airline rules and the dog's black carrying case to an elderly man when a firecracker exploded about two feet away. The dog bolted into the crowd.

We saw a man in a gray raincoat pick up the dog and run through the crowd into a room marked "Employees only." We watched until we had to board the plane. Nobody entered or left that room.

SITUATION F

We are all witnesses to a window cleaner's accident. Listen carefully as I read to you what we have all "seen."

It was early in the morning of September 11, a bright and warm day. We had just arrived at work on the top floor of the old Crest Building in Baltimore. A few minutes later, we saw the window cleaner appear on the scene. He spent almost an hour setting up pulleys and a platform. Then he was finally ready to step out onto the platform and clean windows.

About an hour later we saw a huge orange balloon floating past the windows. The balloon was about 60 feet tall. Hanging from the bottom of the balloon was a wicker basket with a young woman standing in it. The basket swung too close to the building and appeared to knock the window cleaner off the platform. We all rushed to the window to see what had happened. The woman in the basket had grabbed the window cleaner. His feet were kicking in mid-air. Finally they glided away from the building and landed safely in a horse chestnut tree in the middle of the park across the street.

Additional Suggestions

1. Effective listening skills are often closely related to the child's ability to visualize what he or she is hearing. You can help your students learn to visualize more effectively by providing them with practice in listening *and* visualizing. For example, read a description of the eye or heart, and ask your students to diagram or draw what they have heard. (Assure your students that they need not have any great skill in drawing.) Or use descriptions of a battle, an imaginery creature, or a kind of food. Be sure to integrate this kind of exercise into the regular curriculum of your class. Also, be careful to ask your students to draw or diagram something which is relatively simple but which requires attention to detail.
2. There are three general kinds of listening:
    1. Listening for information and organization
    2. Critical listening
    3. Listening for appreciation

    Involve your students in experiences which are directed to each of these kinds of listening.
3. Teach your students to listen carefully to *you!* Try not to repeat instructions again and again. Instead, from the very first day of the school year, accustom your class to the expectation that you will say things only *once.* (You may find this a struggle in the beginning, but the rewards for everyone are worth the effort.)
4. Give your students the opportunity to use the "Tips for Good Listeners" on page 2. Create learning experiences which require your students to use the various skills presented in this section.
5. Give your students immediate reinforcement for effective listening. You can accomplish this by using listening games like the ones given in *Let's Create* by Fritz Bell (Raymond, New Hampshire: Creative Classrooms, 1974). This book is designed for elementary school children, but you can adapt it to the appropriate grade level. These games, which can be used in various subject areas, help the student develop motivation for listening well. For example, one kind of game could start with a statement like this: "I'm going to show you something which will prove that air takes up space. Maybe you could show this experiment to your parents tonight and tell them what you have learned!"

UNIT I SUMMARY: WAYS TO LISTEN

Listening is a skill.

We can learn to listen better by using these "Tips for Good Listeners":

1. When you're listening, try to make sense of what the speaker is saying.
2. Try to connect what you're hearing with what you already know.
3. Try to "picture" in your mind what is being said.
4. Listen for words that tell you about the order in which events occur.
5. Listen to what the speaker has to say first; then decide what you think or feel about it.
6. Try to practice your listening skills every day.

UNIT II: TUNING INTO DIRECTIONS

By the middle school years, students are well acquainted with many of the standard practices which we use in the classroom. As a result of this familiarity as well as other factors, they often do not read or listen to directions carefully. Instead they make assumptions about directions based on their previous experience. Even your best students may try to outguess you and begin an assignment before you have even completed the instructions.

This unit is designed to help students begin to recognize the importance of attending carefully to both oral and written directions.

The first direction which you give in this unit tells your students that they will spell a word in crayon. Looking at the diagram on page 4 of the Student Text, many of your students will immediately perceive the word "listen." Some may go to work at once as a result of this perception, without listening to you and following the other instructions. As the task progresses, you may lose others.

The purpose of this exercise is not to trick your students but to help both you and them discover at what point they tune you out and no longer attend to your instructions. This exercise provides you with a diagnostic tool in reference to your students' skill in reading and listening to directions and following them. You may also wish to ask those students who get the "wrong answer" to examine their own experience of this game; ask them to see if they can discover when and why they "tuned out" to your directions.

Suggested Directions for Unit II

1. Read the entire unit carefully. The "trick" to this unit's activity is presented on page 5 of the Student Text. The last two paragraphs instruct the student to follow only directions 3, 7, and 9. If they play the game correctly, they will create the word *lit*. If they play it incorrectly, the word will be *listen*.
2. Make sure that each student has a pencil and a crayon.
3. Tell your students that they will be playing a game which will show how well they listen to and follow directions.

   Read the directions on page 15 aloud. (These directions begin with "Open your Study Skills Programs" and conclude with direction #10.) Read slowly and clearly. Be sure to read each number as well as each direction. Pause for about five seconds between directions. The last direction is the most important one, but don't overemphasize it.

Open your Study Skills Programs to page 4. This unit is called "Tuning Into Directions," and we're going to play a game about following directions. Now turn your books so the numbers in the diagram are right side up. (Pause to make sure this is done.)

I'm going to read a set of directions to you. *Don't do anything* until I have finished reading the whole set of directions. Then I will read them again, but only one more time. Use the first reading as a preview. You will need this preview to keep in tune for the second reading.

1. One clue is that you will end up with a word spelled out in crayon when you are done with this game. Another clue is that there is a trick to the game.
2. Color in pencil all spaces containing the number seven.
3. Color in crayon all spaces containing the number two.
4. Color in crayon all spaces containing multiples of ten. (If your students are not familiar with this concept, you can say "all numbers that end in zero" instead.)
5. Color in pencil all spaces containing the number one.
6. Color in crayon all spaces containing even numbers between eleven and nineteen.
7. Color in crayon all spaces containing the number four.
8. Color in pencil all spaces containing the number five and number three.
9. Write the word that you have spelled out on the line below the diagram. If you have the correct word, you have won the game!
10. You will not need this direction the second time through, but now it is important. You will find information that you will need to win this game on page 5. Turn to page 5 now, and read it carefully. You will have _____* minutes to do this.

*Decide how much time your students will need to read page 5 and tell them that they will have that amount of time when you read direction #10.

Approximate time: *20 minutes*

4. When the students have completed their reading, repeat directions 1-9. Pause about 20-30 seconds after each direction.

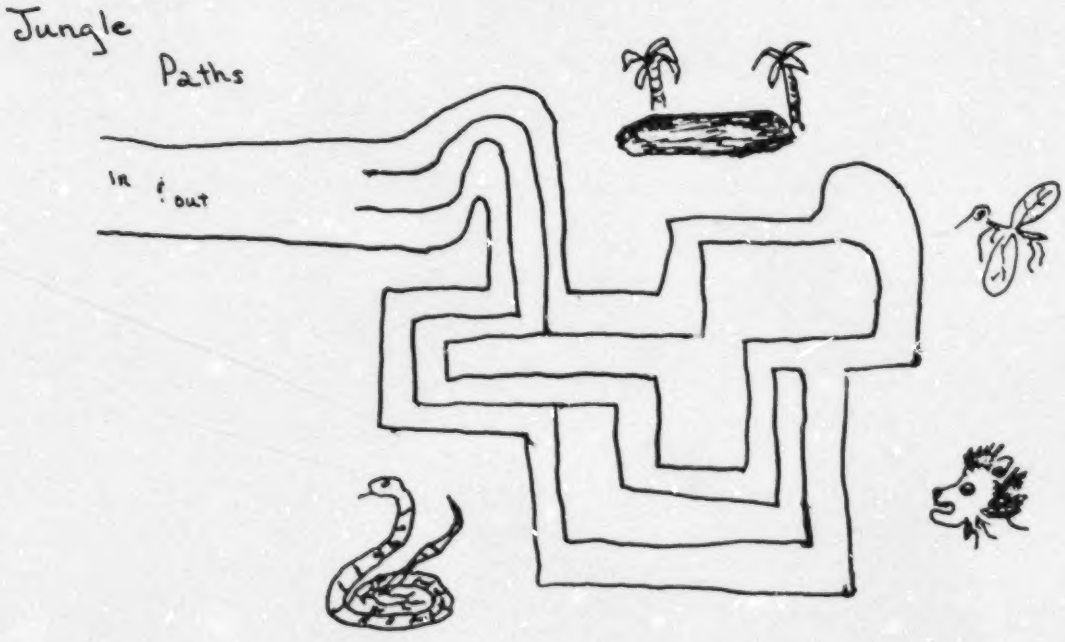
   15-20 minutes

5. Tell your students that the winning word is *lit*. Discuss the importance of following directions in this game.

   5-10 minutes

Additional Suggestions

1. Divide your class into pairs. Let one student be the "director" and the other the "follower." Give each student a copy of a maze like the one below. (You may want to create a more difficult maze.) Ask the "directors" to draw a path through the maze. Tell them not to let their partners see their paths. Then, have the "directors" give oral instructions to the "followers" about how to get through the maze. The object of the instructions is for the "follower" to draw a path through the maze exactly like that of the "director." When the students have finished, ask them to compare the two paths. You "win" if the two paths are identical. Have the students switch roles and repeat exercise.



2. You can find a variety of exercises which require students to follow directions in *Scope Visuals 29: Following Directions,* by Jeri Shapiro (New York: Scholastic Book Services, 1977).

UNIT II SUMMARY: TUNING INTO DIRECTIONS

Reading and listening to directions is an important skill. This is true not only in school but in any situation in life.

Read directions carefully. Be sure to read *all* of the directions. Then, if you don't understand, ask questions.

Listen carefully when someone is giving you directions. Don't try to guess what they are. Listen to *all* of the directions. Then, if you don't understand what you've heard, ask questions.

If you can't remember all of the directions, write them down on a piece of paper.

UNIT III: PUTTING IDEAS TOGETHER

"Putting ideas together" or categorization is an important foundation skill. First we need to help our students learn to see the interrelatedness of detail before we can expect them to develop the skills involved in relating concepts.

Observe your students as they read an assigned text. You may be surprised to discover that many read without trying to organize the information in their reading in any way. To help our students learn to understand the relations between categories and their parts, we need to teach them the necessary skills.

This unit is designed to provide an initial experience in learning the skill of categorization. It is also intended to help your students learn how they can remember information more effectively when it is organized into categories.

Suggested Directions for Unit III

1. Before class, make enough copies of each list below for half of your class.

List A

basketball	duck	robin	tennis
hen	frisbee	green	football
red	tulip	daisy	blue
swan	pink	purple	daffodil
long jump	rose	lilac	raven

List B

SPORTS	BIRDS	COLORS	FLOWERS
basketball	duck	pink	daisy
long jump	hen	purple	rose
frisbee	robin	red	lilac
tennis	swan	green	tulip
football	raven	blue	daffodil

2. Briefly introduce this unit orally. Tell your students that you are going to start the unit with an exercise. Pass out List A to one half of the class, List B to the other half. Don't let your students know that there are two separate lists. Instruct your students to study the words in their list and try to remember as many as possible; tell them that they will have only five minutes to do this.

   After five minutes collect the lists; ask your students to open their Student Texts to page 7 and write down all the words they can remember in the spaces provided. Allow about two minutes for this.

   Approximate time: *10 minutes*

3. Check to see which half of the class remembered the most words. (Studies have shown that people can remember more effectively when ideas or information are organized into categories.) Most likely the students with List B will remember more words. Discuss the outcome in your class briefly.

5 minutes

4. Read "*Why* Do You Organize Information?" and "*How* Do You Organize Information?" (page 7) aloud. Discuss briefly.

   5 minutes

5. Go over the "Example" (page 8) orally. Then have your students do Exercise II (pages 8-10) either individually or in pairs. Ask them to do as much of the exercise as they can complete in ten minutes; suggest that they may not be able to finish all of the exercise.

   15 minutes

6. Divide the class into small groups of 3-5 students. Read the directions for Exercise III (page 11) aloud or have a student read them. Stress that there must be at least three words in each category. Tell the students that they will have ten minutes for this exercise.

   You can make this into a game by giving each group "a point" for each category created which is not mentioned by any other group.

   Go over Exercise III in class. Have each group list its categories on the board; discover which groups have created unique categories.

   15-20 minutes or more (Please note: You may want to have your class do Exercise III on the following day and take more time with it.)

7. Ask your students to complete Exercise II for homework; go over Exercise II orally during the following day. Review the concepts of "organizing information and ideas" and "categories" as you do this.

ANSWERS FOR EXERCISES IN UNIT III

Page 8: Example

1. Los Angeles, New York
2. Louisiana, New Hampshire, New Mexico
3. Louisiana, New Jersey
4. Answers will vary

Pages 8-10: Exercise II

1. ocean, river, lake, stream
2. ocean
3. Answers will vary
4. Answers will vary
5. hot, dry
6. cold, dark
7. hot, cold
8. Answers will vary
9. empress
10. king
11. doctor, mechanic, pilot
12. Answers will vary
13. plants, green
14. green
15. stems, plants
16. Answers will vary

17. gasoline, wood, coal
18. gasoline, water
19. steel
20. Answers will vary
21. fur, feather, skin, scales
22. heart, lung
23. none
24. Answers will vary
25. computer, calculator
26. fraction, multiplication, subtraction, addition
27. multiplication, calculator
28. Answers will vary.

Page 11: Exercise III

Answers will vary; accept any answer which meets the definition of a category given on page 7.

Additional Suggestions

1. Use categorization as a way to preview a new lesson or unit. For example, write "LIVING THINGS" on the board and say, "We are going to study a unit about living things today. Can you name some living things?" Your students will undoubtedly generate a long list of living things. Then, you can discuss categories within the topic of "living things" and have your class organize the items on the list into appropriate categories.
2. Integrate the concept of categorization into what you are teaching. For example, if you are teaching a unit about plants, you could have your students collect a number of plants and examine the characteristics of the plants. Then, the students could arrange the plants by categories.

UNIT III SUMMARY: PUTTING IDEAS TOGETHER

A category is a name for a group of ideas or pieces of information which have something in common.

For example, city, state, town and village all fit into the category of places. They also fit into the category of units of government.

When you organize ideas and information into categories, you can usually remember them better. Also, you will discover how ideas and information are similar and how they are different.

UNIT IV: GETTING THE TIMING DOWN

Sequencing is a thinking skill which helps students to organize information in relation to time. This skill, which we call "getting the timing down," is important for students to learn as they become aware of patterns within narratives and how such patterns relate to ideas of cause and effect.

The exercises in this unit are designed to introduce your students to the concept of sequencing. Your students will also use sequencing skills to predict outcomes based on a knowledge of prior events in a narrative.

Your students' experience with these exercises will provide you with insight into how your students organize and use their own senses of timing.

Suggested Directions for Unit IV

1. The exercises in this unit can be worked by your students individually, in pairs, or in small groups. Or you may want your students to do some of these exercises alone and others with a partner or partners. Look through the unit and decide what approach will be most helpful to your class.

2. Read the "Introduction" (page 14) aloud, or have a student or students read it aloud. Discuss briefly for clarity and emphasis.

   Approximate time: *5-8 minutes*

3. Read the directions to "Philip's Story" (page 15) aloud to your students. Then, have your students work the exercise. (With a young class, you may want to read the instructions aloud also and discuss how to begin the exercise.)

   When your students have completed the exercise, go over their answers; discuss how your students developed their sequences of events. (A "correct" sequence is given in the "Answers For Exercises In Unit IV." Your students may develop other sequences. In your discussion, be sure to talk about why one sequence can be more "correct" than others.)

   15-20 minutes

4. Have your students read "Key Words: Time Qualifiers" (page 17) or read it aloud to them. Discuss briefly. Then, go over the directions for Exercise I (page 17) orally. Do the two examples as a class; then, have your students complete the exercise. Go over the sentences and discuss.

   10-15 minutes

5. If you have time, read "Predicting Outcomes" (page 18) aloud to your students in class, or have a student or students read it aloud; discuss for clarity and emphasis. Read the directions for Exercise III (page 18) aloud to your students and have them begin the exercise in class. Then, assign the remainder for homework.

   If you don't have time to read "Predicting Outcomes" in class, have your students read this section and do Exercise III for homework.

   With either approach, go over Exercise III on the following day.

ANSWERS FOR EXERCISES IN UNIT IV

Page 15: Philip's Story

5 Chuck's
4 Theater
8 Donna's Kennels
1 F.B. Garage
9 Home
3 Wellington Field
7 C.T.'s Daycare
6 Library
2 Dorie's Cookie Factory

Page 17: Exercise I

(Before) Molly left for school, *she ate two pieces of toast.*

We set up the tents (while) the others gathered firewood.

1. I had a great time (after) *I got to know all of the people there.*
2. (Before) Miguel had realized the danger he was in, *he was enjoying sailing over the waves.*
3. Darcy searched for clues to the disappearance of her brother, Ted, but (in the meantime) he slept soundly, unaware that she was trying to find him.
4. *It had taken years of hard work,* but (finally) the statue was finished.
5. (Following) *the wedding ceremony,* there was a reception at the Martin Luther King Community Center.
6. Water expands (when) it is cooled.
7. (As) the ice masses drew back, they carved lakes and hills upon the earth's surface.
8. *Divide the money equally among yourselves,* and (then) go to the store.
9. *The water pressure built up* (until) the dam finally cracked.
10. All (during) the time I had been outdoors planting, the baby had been playing happily in her pen.

Pages 18-20: Exercise III

Answers will vary; accept any answer which makes sense.

Additional Suggestions

1. Develop ways in which your students can use their sequencing skills as a part of your regular curriculum. The more experience that your students have in working with sequences, the more competent they will become in employing these skills.

2. Time qualifiers provide students with one kind of clue in recognizing and understanding sequences. *Connectors* offer another kind of clue. *Connectors* are words which connect ideas together. They can tell you that some action or event has already taken place; they can also inform you about sequences not in time but in the organization of a passage. For example, in the sentence below, *another one* is a *connector.*

   Another one of the clever Fox's tricks was flattery.

   Introduce the idea of *connectors* to your students. Then, have them read several paragraphs which are out of their correct order, like the ones below. Ask your students to circle the *connectors* in these paragraphs, and then place the paragraphs in the correct order.

_____ Another woman who tricked the British was Dicey Langston of South Carolina. She was only fifteen when she became a self-appointed spy. She would watch British military maneuvers from her farm and report to the Patriots. The British were slow to realize that a young girl was the source of so many information leaks.

_____ One of the underestimated women was Nancy Hart. British soldiers burst into her home demanding to be fed. She sent her daughter next door to get some water—and warn the Patriots. By the time the Patriots arrived with her daughter, Nancy Hart had stolen the British rifles, killed one soldier, and cornered the rest of them.

_____ At the time of the Revolutionary War, most people expected women to remain quiet, obedient, and in the background of manly pursuits. This idea got many British soldiers into trouble, because these soldiers underestimated the strength and cunning of American women.

_____ Probably the most famous of all woman Patriots was Deborah Sampson. Unlike the other two women mentioned, she didn't set out to fool the British by appearing to be a weak female. She dressed herself as a man and fought for three years in the army. Her identity was discovered only when she needed to be nursed for a high fever. She was then dismissed, for even the Patriots underestimated the power of a fighting woman.

UNIT IV SUMMARY: GETTING THE TIMING DOWN

"Getting the timing down" means understanding the order of events in a story. The order in which things take place in a story is also called the *sequence* of events.

When you read or listen to a story, you can recognize key words which tell you about when events take place. These words are called *time qualifiers.* Some examples of time qualifiers are: after, before, until, while, following, during.

You can use your ability to "get the timing down" to *predict outcomes.* This means to use what you already know about the sequence of events in a story to figure out what will probably happen next. By trying to predict outcomes as you read or listen, you can become a more active and involved reader or listener.

UNIT V: A MATTER OF TIME

This unit will give you an indication of how your students perceive time. It will also help your students begin to understand how they can make sense of time and how they can begin to control their own use of time through planning.

Some of your students will probably enjoy making and using a schedule; others may not. We suggest that you introduce your students to the idea of a schedule as a tool for one's own use, not as an obligation that one does for others. We have found that setting this unit within such a framework can help to lessen any resistance in your students to learning how to make and use a schedule.

Suggested Directions for Unit V

1. The exercises on pages 25-26 require students to use pencils. If they don't have their own, you will need to provide them.
2. Have your students read the "Introduction (page 21) and write their definition(s). Discuss the various definitions of "time."

   Approximate time: *10 minutes*
3. Divide your class into small groups of 3-4 students. Tell them that they will do Exercise I (page 22) individually but will discuss it in their groups. Read the directions for Exercise I aloud; also, call your students' attention to the additional direction at the bottom of page 23. Now, ask your students to do Exercise I. Tell them that when all the group members have finished the exercise, they should tell each other which events they have starred and discuss their agreements and disagreements.

   15 minutes
4. Have a student or students read the directions for Exercise II (page 24) aloud. Have your students do the exercise; then, go over it as a class.

   5-10 minutes
5. Have a student or students read aloud "What Is A Schedule?" (page 25), or read it aloud yourself. Discuss briefly; then, ask your students to choose two projects and write them in the appropriate spaces. (You may want to discuss possible projects with your students before they make their choices.)

   5-10 minutes
6. Read the directions for "Making A Schedule" (page 26) aloud to your students. Have your students read "How To Make Your Schedule" (page 26) individually; ask them to read these instructions carefully and examine the "Sample Schedule" (page 28) but not to begin making their own schedules. Discuss for emphasis and clarification. Then, ask your students to make their own schedules for homework. (Or you may want your students to make their schedules at this time or at the beginning of the next class period.)

   10-15 minutes
7. Have your students hand in a copy of their schedules the next day. Go over their schedules carefully and give your students constructive feedback. *Ask your students to use their schedules in their daily lives during the next week.*
8. The day after the end of the scheduled week, ask your students to do "Using Your Schedule: What Happened?" (page 29). Discuss your students' experiences with their schedule in class.

Additional Suggestions

1. Provide your students with at least one structured experience in making and using a schedule beyond the exercise in this unit. Assign a project for your class. Ask your students to draw up a schedule for their completion of the project. Then, let them go ahead and work on the project. When your students hand in their completed projects, also ask them to evaluate their own schedules and how useful they were in completing the work of the project.

UNIT V SUMMARY: A MATTER OF TIME

Making a *schedule* for yourself can be helpful when you're trying to plan ahead. A *schedule* is a plan for what you want to do in the future.

When you're making a schedule, first think about what you want to do. Then, write into your schedule when you plan to work and what you expect to get done each time that you work.

When you finish making your schedule, look it over carefully. Does it seem reasonable for you? If not, change it.

After you use your schedule, think about how well it worked for you. Was your schedule helpful? If it was, why was it helpful? If it wasn't helpful, how could you make a more useful schedule?

UNIT VI: IMPROVING YOUR VOCABULARY

Most educators and linguists believe that vocabulary acquisition is encouraged most by a wide variety of reading. Also, they would agree that learning the skills to use context clues significantly aids children in mastering new vocabulary.

Vocabulary lists can be useful. However, the evidence indicates that children can incorporate new words into their vocabulary most effectively if they have seen the words in use.

Units VI and VII deal with vocabulary building skills. This unit is designed to focus on the use of context clues as a decoding skill. When a child learns that he or she can often figure out the meanings of unfamiliar words from their contexts, he or she has acquired a powerful tool for increasing his or her vocabulary.

Suggested Directions for Unit VI

1. Divide your class into small groups of 3-5 students.
2. Have your students take turns reading sections of the "Introduction" (page 30) aloud to the class, or read it aloud yourself. Then, go over the directions to Exercise I (page 31). Read the three paragraphs aloud to your students. Then, ask your students to write definitions for the underlined words. You may wish to have them do this individually or in groups.

   10 minutes
3. Before going over the definitions of the underlined words, have your students turn to "Learning About New Words" (page 32). Read this section aloud to your students and discuss it as you go along; go over the example.

   5 minutes
4. Turn back to Exercise I. Go over the definitions and briefly discuss the context clues available for each underlined word in the passage.

   5-10 minutes
5. Go over the directions for Exercise II (page 32) and Exercise III (page 33) with your students. Then, have them work through these exercises in their groups. When the groups have completed both exercises, go over the words they underlined and the definitions they constructed; focus the discussion on how they used context clues. You may wish to let one group talk about one of its words, a second group talk about another word, and so on.

   15-20 minutes
6. Read aloud "How Can You Learn New Words From Your Reading?" (page 34), or have students take turns reading sections aloud. Discuss briefly.

   5 minutes
7. Have students do Exercise IV (page 34) individually; go over in class. If you lack time for this exercise, you may wish to assign it for homework and go over it the next day.

   10 minutes

ANSWERS FOR EXERCISES IN UNIT VI

Page 31: Exercise 1

ridges— raised lines or strips that are higher than the rest of the substance
eased— moved slowly, gently
upright— erect, right side up
crest— top
dispersed— spread around
peering— looking

Page 32: Exercise II and Page 33: Exercise III

Answers will vary. These are words likely to be underlined by your students:
conquerors— ones who gain control
Poseidon— god of the sea in Greek mythology
devouring— eating hungrily
spied— spotted
capsized— turned over
exhilaration— feeling of great excitement
relieved— let go of worry
victim— one who is injured

Page 34: Exercise IV

1. d
2. c
3. c
4. c
5. a
6. b
7. d
8. b

Additional Suggestions

1. If your students have difficulty working with context clues, you may want to let them work with the "cloze" procedure. The "cloze" procedure is a method of deleting specific words from a prose passage and then asking the student to supply the missing words.

   Example: When you have a cold, it is a good idea to stay home in _____. You should take two aspirin and _____ plenty of liquids.

   This kind of exercise gives your students another way of learning about the uses of context clues.

   You can use old workbooks to create "cloze" exercises. Simply black out the words which you want your students to add.

2. Design exercises using the reading from your curriculum which give students more practice in making use of context clue skills.

3. Use a context clue exercise which employs imaginary words, like the one below.

Look at the imaginary word *snire* in the sentences below.

> The creature lowered his head, his eyes blazing. He aimed his *snire* at his enemy and breathed a flame which consumed him in seconds.

You know that a *snire* is *something* because the creature aimed *it*. But what kind of *thing* is it? Figure out all that you can about the word *snire* from its context. Then, write *your* definition on the lines below.

snire / snīr/ n. _____

_____

_____

_____

When your students are finished, let them share their definitions with each other and discuss the variations. You may also want your students to work this kind of exercise in pairs or in small groups.

UNIT VI SUMMARY: IMPROVING YOUR VOCABULARY

A context is the setting in which something is found. In language, context means the words and sentences around any particular word.

Context clues are familiar words and phrases in a sentence or paragraph. From these familiar words you can often figure out the meaning of an unknown word.

When you come across a new word in your reading, first try to figure out its meaning from its context clues. If you can't, then you need to look it up in the dictionary.

UNIT VII: USING A DICTIONARY

The dictionary is an essential tool for vocabulary acquisition. Yet students often disregard this tool because they lack the skills for its effective use. They often avoid acquiring these skills because they perceive them as difficult and tedious. Your awareness of your students' reticence may help to minimize their resistance to learning about the uses of the dictionary. (You may want to use some of the more engaging dictionary use exercises which are noted below and in the Additional Suggestions in conjunction with this unit.) The aim of this unit is to engage your students in working with several important skills for the use of the dictionary. Before you ask your students to do this unit, we suggest that you examine the dictionary skills that they aleady have. For the unit to be effective, your students should possess at least some proficiency in the following skills:

1. Basic alphabetizing skills
2. Use of phonetic keys
3. Recognition of the abbreviation of parts of speech
4. Use of guide words
5. Recognition of what a dictionary entry is

If your students lack these skills, you may want to focus on them over a period of several weeks. At the beginning of each class, you can work with one aspect of dictionary use for several minutes. For example, you might say:

"I will give you five minutes to find the page numbers for the following words . . . See how many you can find!"

"Find two meanings where the word *pick* is used as a noun."

"You have fi : minutes to find the guide words for the following words . . ."

"How many dictionary entries are there for the word *up*?"

It's important to correct these exercises immediately and discuss the sources of errors.

Such dictionary skill exercises are also helpful in the building of listening and direction following skills.

Suggested Directions for Unit VII

1. At the beginning of the class, divide your students into small groups of 2-4. Equip each student with a dictionary. It would be helpful if all students have the same edition, but this is not essential. (If you don't have enough dictionaries for each student to have one, give each group as many as possible to share.)

2. Read the "Introduction" (page 36) aloud to your students, or have a student read it aloud. Read the first section of the directions for Exercise I (pages 36-37) aloud and ask your students to do this exercise. Go over the answer; if students reach different answers, briefly discuss how this happened.

   Approximate time: *10 minutes*

3. Read the second part of the directions for Exercise I aloud. Have your students do the example; then, go over it. Have your students work through this exercise either individually or in pairs. When they have completed the exercise, go over it orally.

   10-15 minutes

4. Read the directions for Exercise II (pages 37-38) aloud; emphasize that students should try to put an answer in each blank, even if they don't know the correct name for some part of the entry. Have your students do this exercise either in small groups or in pairs. When your students have completed the exercise, go over it orally; discuss and clarify.

   10-15 minutes

5. Exercise III (page 39) can be used as further classwork or as homework.

ANSWERS FOR EXERCISES IN UNIT VII

Pages 36-37: Exercise I

Number of meanings listed for *run:* depends on your dictionary.

Accept any reasonable answers in this exercise.

Example: to go rapidly or hurriedly

1. a ravel in a knitted fabric
2. freedom of movement
3. the distance covered
4. enter into an election
5. an unbroken course of performances
6. to go up a river to spawn
7. a rapid scale passage
8. a route traveled with regularity
9. to cause to go in a specific direction
10. slip through or break through

Pages 37-38: Exercise II

Accept any reasonable answers.

2. shows how the word is pronounced
3. the second meaning of the first entry
4. using that meaning in a sentence as an example
5. shows that this is the second entry for the word
6. part of speech
7. inflected forms, or verb endings
8. part of speech
9. derivation, or what language the word comes from

Page 39: Exercise III

Accept any reasonable answer.

Example: small amount

1. to draw carefully, to sketch over
2. a sign showing that something has passed by
3. hint or slight evidence
4. one or more vascular bundles supplying a leaf or twig
5. to be guided by marks or signs
6. to review in outline form
7. a mark or sign made by an instrument which records
8. either of two straps attached to an animal and to the vehicle which is drawn by the animal
9. to be guided by marks or signs
10. connecting bar or rod

Additional Suggestions

1. Use an imaginary word exercise like the one described in the "Additional Suggestions" for Unit VI. Or have your students make up their own imaginary words. Then, ask them to create dictionary entries for their imaginary words and use the words in sentences.
2. Have your students make up imaginary words and write them phonetically, using a dictionary pronunciation key. They can exchange words with a partner and take turns pronouncing the imaginary words.
3. A *Word Theater Kit,* by Richard Boning (New York: Barnell Loft, 1978), includes exercises which engage students in putting on skits to act out the various meanings of words.
4. Explore homonyms like these:

ob ject´	ob´ject
rec´ord	re´cord
con´sole	con sole´

   Help your students to discover that such words have not only different pronunciations and different meanings, but they are also different parts of speech.

UNIT VII SUMMARY: USING A DICTIONARY

One word can have many different meanings. You can use the dictionary to learn about the various meanings of a word and to figure out which meanings you need to learn.

The dictionary can also give you other useful information about a word:

1. How the word is pronounced.
2. The part or parts of speech of the word.
3. Examples of how the word can be used.
4. Various forms of the word; for example, plural, past tense, etc.
5. Any special uses of the word.

UNIT VIII: BUILDING SENTENCES

The best way for students to learn to write complete, effective, and satisfying sentences is through the ongoing experience of writing sentences.

While the statement above may sound obvious, its meaning is one which we often neglect in school. Studies have shown that in all subjects except English, more than half of the writing that we ask students to do takes place during tests (this includes both self-contained and subject area classrooms). Does it make good educational sense for us to measure students' learning through their mastery of skills which we have not taken the time to develop?

We believe that teachers in all subject areas have a responsibility to help their students learn to write effectively. Certainly the English teacher has a central role in the teaching of writing, but writing skills are relevant to all subjects.

This unit is designed to help students develop an understanding of what a complete sentence is and how one builds a complete sentence. The activities of this unit offer the student a way of recognizing the presence or absence of complete sentences both in his or her own work and in the writing of others. They do not take the place of actual practice in writing but complement such practice.

Be sure to read the "Suggested Directions" carefully before you teach this unit. You may find that you will need at least half an hour to learn to use this unit effectively.

PLEASE NOTE: Teaching this unit in an effective way will probably require two class periods.

(If you are an English teacher, you may want to discuss parts of speech in greater detail when you teach this unit. For organizational purposes, we have referred to direct objects, predicate adjectives, and predicate nouns as "completers." These words "complete" verbs which do not stand alone. English teachers may want to change this term so it fits more appropriately into your Language Arts curriculum.)

Suggested Directions for Unit VIII

1. Have a student or students read the "Introduction" (page 40) aloud. Then, ask your students to read "Sentence Patterns" (page 40) to themselves. Discuss the three sentence patterns in terms of similarities and differences.

   Approximate time: *10 minutes*

2. Do Exercise I (page 41) as a class activity. Make a copy of the chart (page 41) on the board. Read the directions for Exercise 1 aloud. Then, work through the "additions" below. Read the first one aloud; call on your students to supply an "addition" to the core sentence; write the "addition" in the chart on the board, and ask your students to write the "addition" in the chart in their programs. Work through each of the "additions" in this way.

Continued on the next page.

"Additions" for Exercise I (The numbers of these "additions" correspond to the numbered lines in the chart on page 41.)

1. Add a word or group of words that describe Jeanna.
2. Add a word or group of words that describe how Jeanna sings.
3. Add a word or group of words that tell where Jeanna sings.
4. Add a word or group of words that tell when Jeanna sings.

When you have completed the "additions," ask your students to read the section below the chart on page 41 and complete examples 1 and 2. Go over the answers to these examples orally.

10 minutes

****

PLEASE NOTE:

Your answers for the chart in Exercise I will look like the following sentences:

1. Young Jeanna sings.
2. Young Jeanna sings loudly.
3. Young Jeanna sings loudly in the basement.
4. Young Jeanna sings loudly in the basement as the sun sets slowly in the west.

In all exercises in this unit, once a word or phrase has been added to the core sentence, you must also add it to all of the sentences *below* the one to which it was first added. Be sure that your students understand this procedure.

For your convenience, the "additions" for all six exercises in this unit are listed together on page 34 in the Teacher's Guide.

****

3. Read the directions for Exercise II (page 42) aloud; have your students choose words for their core sentences and write them on the chart. Then, ask your students to make the following "additions" to their core sentences:

"Additions" for Exercise II (The numbers of these "additions" correspond to the numbered lines in the chart on page 42.)

2. Add a word or group of words that describe the noun part.
3. Add a word or group of words that tell how the verb part is happening.
4. Add a word or group of words that tell where the action is happening.
5. Add a word or group of words that tell when the action is happening.

When you have completed the "additions," ask your students to write their final sentences on the marked lines at the bottom of page 42. Then, follow the procedure below:

> Have your students exchange their programs with each other. Then, repeat the directions for "additions" 2-4 above, changing the "add" to "cross out." Have your students "cross out" each of the "additions" to their neighbor's sentence as you go through these directions. Check to be sure that students have arrived at the core of their neighbor's sentence.

If you are not comfortable with this "crossing out" exercise, an alternate procedure is listed below.

> Have several students read their final sentences aloud, or have them write their sentences on the board. Discuss the similarities and differences in the various sentences. Help your students see that although the sentences vary in terms of vocabulary and meaning, all have the same core sentence within them.

10-20 minutes

4. Have your students read "A Second Sentence Pattern" (page 43), or read it aloud to them. Then, do Exercise III in the same way that you did Exercise I. However, omit the board and class work and have students complete the chart individually.

"Additions" for Exercise III (The numbers of these "additions" correspond to the numbered lines in the chart on page 43.)

1. Add a word or group of words that describe Jeanna.
2. Add a word or group of words that describe broccoli.
3. Add a word or group of words that explain why Jeanna dislikes broccoli.

Have your students complete the examples at the bottom of page 43. Go over the examples orally.

10 minutes

5. Do Exercise IV (page 44) in the same way that you did Exercise II.

"Additions" for Exercise IV (The numbers of these "additions" correspond to the numbered lines in the chart on page 44.)

2. Add a word or group of words that describe the noun part.
3. Add a word or group of words that describe the completer.
4. Add a word or group of words that explain why whatever the sentence describes is happening.

10-15 minutes

6. Have your students read "A Third Sentence Pattern" (page 45), or read it aloud to them. Then, do Exercise V (page 45) in the same way that you did Exercise III.

"Additions" for Exercise V (The numbers of these "additions" correspond to the numbered lines in the chart on page 45.)

1. Add a word or group of words that describe the lifeguard.
2. Add a word or group of words that tell when Jeanna is the lifeguard.
3. Add a word or group of words that tell why Jeanna is the lifeguard.

Have several students read their final sentences aloud; discuss these sentences in terms of similarities and differences.

10 minutes

7. Have your students read "How To Complete Linking Verbs" (page 46) and examine the accompanying chart. Discuss briefly. Then, have your students do Exercise VI (page 46). Have them follow the initial directions for the exercise, and then ask them to make the following "additions."

"Additions" for Exercise VI (The numbers of these "additions" correspond to the numbered lines in the chart on page 46.)

2. Add a word or group of words that explain when your sentence is happening.
3. Add a word or group of words that explain where your sentence is happening.
4. Add a word or group of words that explain why your sentence is happening.

Complete this exercise using one of the alternative procedures described at the end of the directions for Exercise II.

10-15 minutes

"ADDITIONS" for the Exercises in Unit VIII

Exercise I (The numbers of these "additions" correspond to the numbered lines in the chart on page 41.)

1. Add a word or group of words that describe Jeanna.
2. Add a word or group of words that describe how Jeanna sings.
3. Add a word or group of words that tell where Jeanna sings.
4. Add a word or group of words that tell when Jeanna sings.

Exercise II (The numbers of these "additions" correspond to the numbered lines in the chart on page 42.)

2. Add a word or group of words that describe the noun part.
3. Add a word or group of words that tell how the verb part is happening.
4. Add a word or group of words that tell where the action is happening.
5. Add a word or group of words that tell when the action is happening.

Exercise III (The numbers of these "additions" correspond to the numbered lines in the chart on page 43.)

1. Add a word or group of words that describe Jeanna.
2. Add a word or group of words that describe broccoli.
3. Add a word or group of words that explain why Jeanna dislikes broccoli.

Exercise IV (The numbers of these "additions" correspond to the numbered lines in the chart on page 44.)

2. Add a word or group of words that describe the noun part.
3. Add a word or group of words that describe the completer.
4. Add a word or group of words that explain why whatever the sentence describes is happening.

Exercise V (The numbers of these "additions" correspond to the numbered lines in the chart on page 45.)

1. Add a word or group of words that describe the lifeguard.
2. Add a word or group of words that tell when Jeanna is the lifeguard.
3. Add a word or groups of words that explain why Jeanna is the lifeguard.

Exercise VI (The numbers of these "additions" correspond to the numbered lines in the chart on page 46.)

2. Add a word or group of words that explain when your sentence is happening.
3. Add a word or group of words that explain where your sentence is happening.
4. Add a word or group of words that explain why your sentence is happening.

Additional Suggestions

1. Dictate a simple sentence. Have your students build sentences in a pyramid by adding 1-3 new words on each new line. Each addition must result in a complete sentence.

   Example:

   The boy jumped.
   The big boy jumped.
   The big boy jumped over the fence.
   The big bratty boy jumped over the fence.

   You may want to have a few students do their work on the board. Also, you can structure this exercise into a game in which the students who build the longest complete sentences within a given period of time earn "points."

2. Do the exercise above, but specify that your students must work within the context of the content of a specific lesson or unit. What your students add must be correct information.

   Example:

   Water freezes.
   Fresh water freezes.
   Fresh water freezes at zero degrees.
   Clear fresh water freezes at zero degrees Centigrade.

3. If you are a Language Arts teacher, you may want to ask your students to cross out various parts of speech in their final sentences in the exercises above until they have reached a core sentence.

4. Give your students a group of words which has no core sentence within it. Ask your students to rewrite the words into a complete sentence; tell them that they may add any words which they need to create a complete sentence.

UNIT VIII SUMMARY: BUILDING SENTENCES

Every complete sentence will have a *core sentence* within it. The core sentence will fit into one of the three sentence patterns below.

Pattern #1	**Noun part**	**Verb part**	
	Jeanna	sings.	
Pattern #2	**Noun part**	**Verb part**	**Completer**
	Jeanna	dislikes	broccoli.
Pattern #3	**Noun part**	**Linking verb**	**Completer**
	Jeanna	is	the lifeguard.

UNIT IX: READING FOR MEANING

This unit and the two which follow it compose a sequence which focuses on reading a textbook, taking notes from reading, and taking notes from listening. You may want to examine all three of these units before you begin to teach Unit IX.

When faced with a reading assignment in a text, most students in the middle school years begin with the first word in the assignment and continue as far as their interest, sense of duty, or fear of failure carries them. Yet, regardless of how far they get in their reading, the method used is the same inefficient one because the reading is done without thought or purpose.

This unit will introduce your students to a way of reading texts which can be much more effective for learning than starting with the first word and reading as far as one gets. The method is "reading for meaning," and it includes four steps:

Surveying
Reading
Mapping
Checking yourself

Included within the "reading for meaning" method are several important concepts and skills. Your students are probably familiar with some of these and unfamiliar with others. While these skills and concepts can be taught separately, we have presented them in an integrated way in this unit because this is the way a student would actually use them. However, you may find that your students need more practice with these skills and concepts as separate topics.

The skills and concepts are the following:

1. *Understanding what main ideas and supporting details are and locating them in a paragraph or passage.*

   This is a key thinking skill with which your students may need additional work. Several useful sources for teaching main ideas and supporting details are listed in the "Additional Suggestions" for this unit.

2. *Recognizing the topic sentence of a paragraph.*

   Some of your students will probably be familiar with this skill but may need review. Others may require more instructional attention. Also, you may want to give all of your students practice in locating the topic sentence in paragraphs where it is not the first sentence. Or, ask your students to write paragraphs where the topic sentence is not first.

3. *Surveying.*

   Your students may already know about a related skill called "scanning." You can introduce them to "surveying" by comparing it with "scanning." Another introductory exercise which you may want to use is this: hand your students different paperback books and ask them, "Do you think you'd like to read this book?" They'll probably "survey" the book by checking the title, number of pages, size of print, kinds of illustrations, and so on. Perhaps they will read a little of the text. When your students have finished "surveying," discuss with them what they have done to examine the book and what they have learned from this.

4. *Mapping*

   Mapping is a pictorial method of taking notes. As students of middle school age are still highly tactually and visually oriented, they can often work with ideas more effectively through visual representations. Such visualization also helps them to retain the material contained in the notes.

   Outlining, the traditional method for taking notes, is introduced in the following unit. Mapping is an alternative method which can prove extremely useful (1) to students for whom outlining is not a helpful tool, and (2) in situations where the presentation lacks a clear organization, such as class discussions.

   If mapping is new to you, we suggest that you examine it carefully, experiment with its applications, and help your students master its uses if you share our perception of its value.

   If you are interested in learning more about mapping, we suggest that you examine *Using Both Sides Of Your Brain,* by Tony Buzan (New York: E.P. Dutton, 1976), pages 83-107.

5. *Checking yourself*

   When children first try this step, they often gain more by telling what they know to each other or, when possible, to an older child or adult. As they speak, they often can discover the gaps in their understanding of what they have read. When children become more confident about this step, they are more likely to use self-recitation effectively.

   You may want to give your students practice with this step by having them "check themselves" with peers. You might also encourage them to use this step by talking with their parents and older siblings.

A Note about Teaching Methods

The usefulness to any student of the "reading for meaning" method clearly depends on his or her ability to use the method individually. For the purpose of introducing students to this method, we strongly recommend that you organize your class into small groups, as noted in the Directions below. Many students will find the "reading for meaning" method detailed and challenging. Students working in groups will be more willing to become engaged in learning the various steps of the method as a result of their participation in a group. Encourage your students to share the work of the group actively, even if it seems inefficient at times. Then, after the initial lesson, you can structure assignments which will require the student to use the "reading for meaning" method on an individual basis.

Suggested Directions for Unit IX

1. At the beginning of the period, divide your class into small groups of two or three. Have your students work all of the exercises in this unit in these groups, with the exception of "How Do You Read?" (page 48) which they should do individually. ("How Do You Read?" is a diagnostic exercise which is designed to help your students become aware of how they currently read textbooks.)

2. Read "How Do You Read?" (page 48) aloud to your students. If necessary, briefly clarify the assignment. Then, tell your students that they will have 1½ minutes to complete the assignment. When they are done, have several students read aloud what they have written; see if other students have different responses. Discuss briefly. Then, read the "Introduction" (page 50) aloud to your students, or have a student read it aloud.

   Approximate time: *5-10 minutes*

3. Read aloud "Reading For Meaning" (page 50), or have a student read it aloud. Discuss briefly for emphasis. Then, have your students do Exercise I (page 50). Go over the exercise.

   5-10 minutes

4. Have a student read aloud "Main Idea And Supporting Details" (page 51), or read it aloud yourself. Have your students do Exercise II (page 51). Go over the exercise.

   5-10 minutes

5. Have your students read "How Do You Find The Main Idea?" (page 51). Discuss for clarity and emphasis.

   5-10 minutes

(You may need to spend an entire period on directions 2-5 above and continue with the rest of the unit on the following day. However, if your students already have some familiarity with the concepts and skills presented in the first half of this unit, you may want to complete the unit in one period.)

6. Have your students work through "How To Read For Meaning" (pages 52-55) in a way which is appropriate for your class. You may want to lead them through each step of the "reading for meaning" method by going over the introductory paragraphs, having your students work the exercise, and then going over the exercise. Or, you may want to introduce the method to your students, lead them through the first step (surveying and Exercise III on page 53), and then have them work through the remaining steps on their own. When they are done, go over all of the exercises. (Another way of structuring this instruction is discussed in #1 in the Additional Suggestions to this unit.)

   NOTE: For Exercise III, be sure to give your students only 20-25 seconds to survey the paragraph. Then, ask them to write the main idea.

   20-40 minutes

7. Have a student read aloud "Why Take Notes?" (page 56). Discuss for clarity and emphasis.

   5-8 minutes

ANSWERS FOR EXERCISES IN UNIT IX

Page 50: Exercise I

Dogs have a strong sense of smell, can use it for tracking.

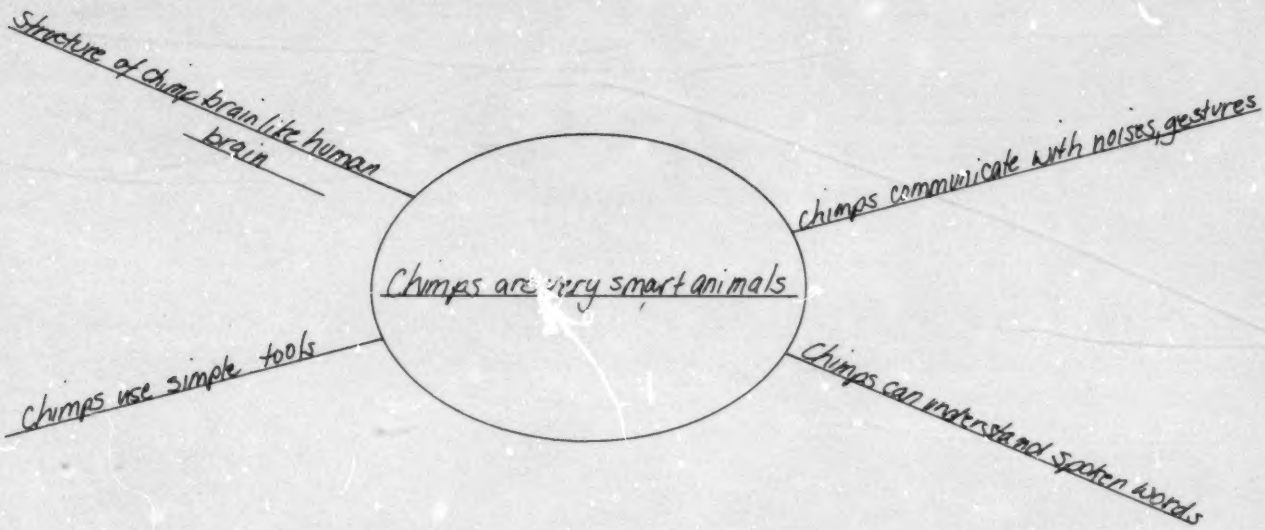
Page 51: Exercise II

1. Tracking by smell, dogs can find people who are lost in the woods.
2. Dogs can track prey for hunters.
3. Some dogs are better than others at tracking by smell.

Page 53: Exercise III

People will buy frogs.

Page 55: Exercise V


Structure of chimps brain like human brain
chimps communicate with noises, gestures
Chimps are very smart animals
chimps use simple tools
chimps can understand spoken words

PLEASE NOTE! These answers are only "suggested." Accept any answers which are accurate and make sense.

Additional Suggestions

1. Some students initially perceive the "reading for meaning" method as a great deal of extra work without sufficient reward. If you think your students are likely to respond to the method in this way, you may want to teach this unit one step at a time over a period of a few weeks. Help your students become competent and confident with main ideas and suppporting details before you start surveying, with surveying before mapping, and so on. For many students, when they learn the "reading for meaning" method in this manner, they can approach it with less resistance and see its value to them more clearly.
2. A good source book for teaching about main ideas is *Reading For Main Ideas: A Guide For Teachers* (Hartford, Connecticut: Connecticut State Department of Education, 1978). Other helpful materials are *Understanding The Main Idea* (Middle Level) (Providence, Rhode Island: Jamestown Publishers, 1974) and *Main Idea* and *Facts And Details* (Elizabethtown, Pennsylvania: The Continental Press, 1977).
3. You can create activities which require your students to read for main ideas. For example, cut out newspaper articles and their headlines. Put the articles in one box and the headlines in another. Ask your students to match the articles with their headlines.
4. Give your students topic sentences which summarize parts of a lesson or a unit which you have taught. Ask your students to state the main ideas expressed in the topic sentences and supply important supporting details in mapping form. Students can do this kind of exercise individually or in groups.

UNIT IX SUMMARY: READING FOR MEANING

READING FOR MEANING means locating the MAIN IDEAS and the important SUPPORTING DETAILS in your reading.

The *main idea* in a paragraph is the most important idea. It is the idea which the rest of the paragraph is about.

Supporting details explain, prove, or tell something more about the main idea. They make the main idea more clear or give more information about it.

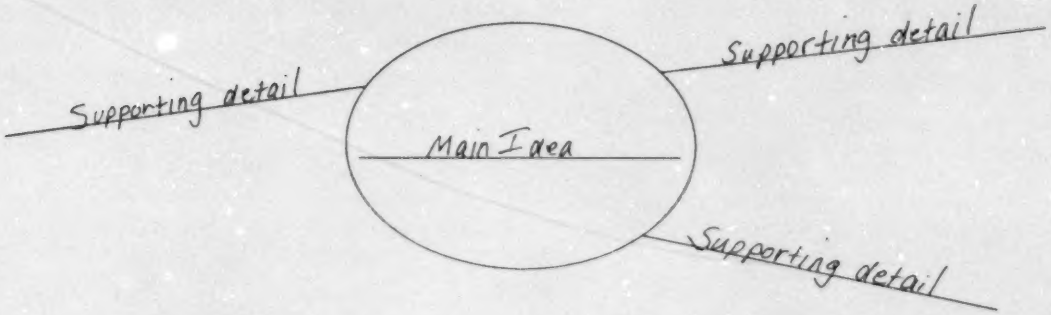
The main idea of a paragraph is stated in the *topic sentence.* Most often the topic sentence is the first sentence in the paragraph. It can also be last or in the middle.

How do you READ FOR MEANING? Use these four steps:

1. SURVEYING: Look quickly at any headings or titles above the paragraph. Then, read the first and last sentences of the paragraph. SURVEYING will usually help you to find out what the *main idea* is.

2. READING: Read the paragraph at your normal rate of reading. As you read, look for *supporting details.*

3. MAPPING: Make a MAP like the one below to take notes from your reading. MAPPING helps you to learn the *main idea* and *supporting details* of the reading. It also gives you a record of the reading which you can use later.



4. CHECKING YOURSELF: Look at your MAPPING notes and tell yourself what the reading is about. Or ask yourself: what have I learned from reading this?

UNIT X: TAKING NOTES: MAPPING AND OUTLINING

This unit continues the sequence begun in Unit IX by focusing your students' attention on note taking as an important skill in itself. We strongly believe that the measure of a student's note taking capability is not the particular method employed but, rather, is the usefulness of the student's notes. Research into cognitive and learning styles during the past three decades has verified what every perceptive classroom teacher already knows: that people perceive, understand, and respond to the world in very different and personal ways. In view of this diversity in perception and cognition, this unit introduces your students to three different note taking methods: mapping; outlining; mapping with numbers.

The unit also suggests that (1) different individuals may use different methods in the same situation and that (2) any one student may want to use different note taking methods in different situations. For example, a student who works well with linear, sequential processes may feel more comfortable and be more effective with outlining. A more visually oriented student, however, may flourish with the use of mapping. Also, even the most sequentially oriented student may find mapping valuable in a particular context, or vice versa.

The diversity in learning style which we noted above also informs us that for any particular note taking situation, there may not be one "correct" set of notes. Instead, students may include a similar body of main ideas and important details but record them in very different ways. In giving your students feedback about their note taking skills, we suggest that you primarily consider the effectiveness of your students' notes for them as individuals.

During our classroom testing of this unit, some teachers reported that their students initially found outlining a difficult task. If your students experience this, you may want to have them work with partially completed outlines at first. Then, you can gradually reduce what is supplied in the outline until the students are creating their own outlines.

Suggested Directions for Unit X

1. Read the "Introduction" (page 57) aloud to your students. Then, have a student read aloud each of the "Tips For Taking Notes" (page 57). Discuss each tip for clarity and emphasis.

   Approximate time: *5 minutes*

Have your students read "*Breaking Down* Sentences" (page 58), or read it aloud to them. Discuss briefly. Have your students do Exercise I (page 58). Go over the exercise.

5-10 minutes

3. Have your students do Exercise II (page 59) and then go over the exercise. (Before your students begin, you may want to review the "reading for meaning" method with them.)

   PLEASE NOTE! A completed map for this exercise appears on page 62 in this unit as part of "A Third Way To Take Notes: Mapping With Numbers."

   5-10 minutes

4. Read aloud "Another Way To Take Notes: Outlining" (page 60), or have students read it aloud. Discuss for clarity and emphasis. Then, have your students do Exercise III (page 60); go over the exercise. Or, you may want to do Exercise III on the board as a whole class activity.

   10 minutes

5. Have your students do Exercise IV (page 61); go over the exercise. Again, you may want to do this exercise as a whole class activity.
   5-10 minutes
6. Read aloud "A Third Way To Take Notes: Mapping With Numbers" (page 62). Discuss when this way of taking notes might be useful. Then, have your students read "How Should *You* Take Notes?" (page 62). Discuss for clarity and emphasis.
   5-10 minutes

ANSWERS FOR EXERCISES IN UNIT X

Page 58: Exercise I

1. Columbus believed earth round, few agreed
2. Northern states— wind energy help solve energy crisis
3. Apple— important fall harvest in NY
4. Late 1840s— people went to Cal. seeking gold
5. Viking— Scandinavian sailor and fighter

Page 59: Exercise II

Answers on page 62 in the Student Text, with numbers omitted.

Page 60: Exercise III

I. Cause of hail
   A. Hot weather, thunderstorm
   B. Cold air over warm air— upward wind
   C. Rain blown up into cold air
   D. Rain freezes— hail
   E. Hail blown down, up many times before hits the ground

Page 61: Exercise IV

I. The Tasaday tribe
   A. No communication with rest of world until 1972
   B. Lived in caves in remote mountain valley in Phillipines
   C. Used stone tools, ate only what they gathered

PLEASE NOTE! These answers are only "suggested." Accept any answers which make sense and are accurate.

Additional Suggestions

1. Have your students use their note taking skills in other contexts. For example, have students map or outline sections of a textbook. Help your students to build their note taking skills gradually and thoroughly. Be careful to assign materials well within their reading levels while your students are still learning the mapping and outlining methods.

2. Have your students map or outline a process which they know well. For example: baking a cake, building a model, or setting up a tent. This kind of exercise will also reinforce sequencing skills and the selection of main ideas.

3. Ask your students to map or outline a descriptive paragraph. For example, have them map the traits of a main character or the main parts of a flower. By doing this sort of exercise, your students will discover that the sequence of a map or outline can vary in many situations and still be valid.

4. Collect your students' notes on a regular basis throughout the year and offer your students feedback about how effective their note taking skills seem to you. Let them know what they are doing that seems to work in your judgment, and what they are doing that doesn't. A way to facilitate your "checking" of your students' notes is to have them make carbon copies of their notes on occasion. Then, they can keep the original for their own use while handing in the copy for your response.

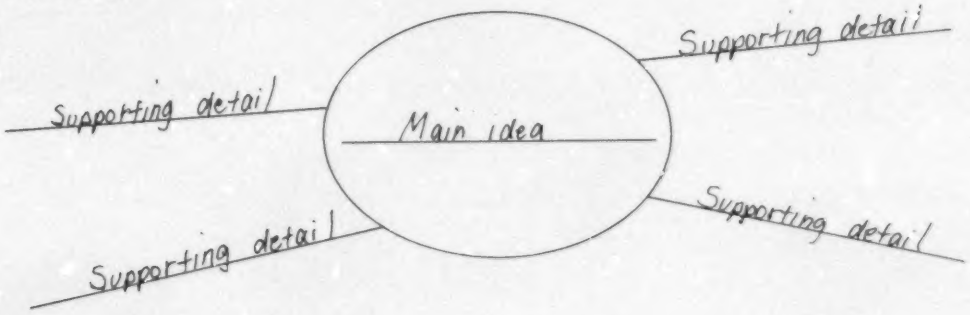
UNIT X SUMMARY: TAKING NOTES: MAPPING AND OUTLINING

Three good ways of taking notes are: OUTLINING
MAPPING
MAPPING WITH NUMBERS

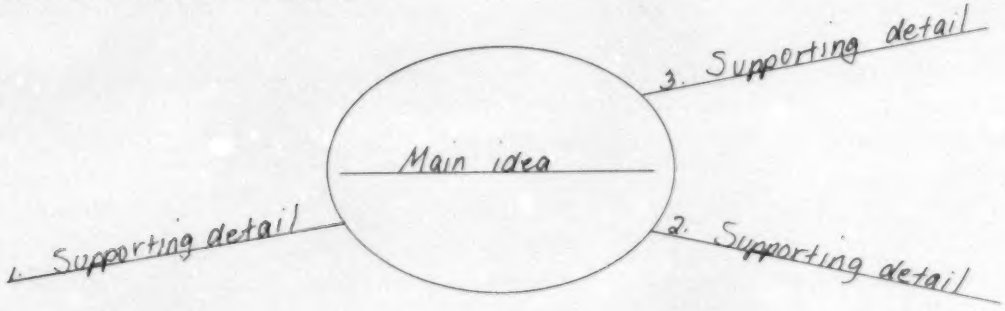
OUTLINING

I. Main Idea
A. Supporting detail
B. Supporting detail
C. Supporting detail
D. Supporting detail

MAPPING



MAPPING WITH NUMBERS



TIPS FOR TAKING NOTES

1. When you take notes from reading, don't write in complete sentences. Write down only the words and phrases which tell you the *main ideas* and *supporting details* of the reading.
2. REMEMBER: Your notes are for you! Use a way of taking notes which works for you. Also, be sure that you understand what your notes say. You can take notes *in your own words!*
3. You may want to use different ways of taking notes for different kinds of reading.

UNIT XI: LISTENING AND TAKING NOTES

This unit provides an experience for your students to integrate listening skills with note taking skills.

For Exercises I and II in this unit, we have asked you to create and deliver a short talk and to structure and lead a brief class discussion. We have not provided the content for these exercises because we are certain that what you can create for these purposes will be more engaging and useful to your students than what we could provide for you.

Suggested Directions for Unit XI

1. Have your students read the "Introduction" and "Listening And Taking Notes" (page 64). Discuss briefly.

   Approximate time: *5 minutes*

2. Read aloud "How Do You Start?" (page 65); discuss for clarity and emphasis. Have a different student read each of the "Tips For Taking Notes From Listening" (page 65). Briefly discuss each tip.

   5-10 minutes

3. Have your students read the directions for Exercise I (page 66). Put a brief outline for a 5-minute talk on the board. Then, ask your students to decide what method they plan to use for taking notes from your talk. Deliver your talk to the class while your students take notes.

   8-10 minutes

4. Have your students answer the questions in "Looking At Your Notes" (page 67). Discuss each of the questions with your students. (You may want to have several students put their notes on the board.)

   10 minutes

5. Have your students read the directions for Exercise II (page 68). Ask your students to decide which note taking method they plan to use. Then, lead a 5-minute class discussion. (You may want to remind your students that they will need to participate in the discussion *and* take notes about it.)

   8-10 minutes

6. Ask your students to evaluate their own notes from Exercise II using the questions from "Looking At Your Notes." Discuss.

   5-10 minutes

Additional Suggestions

1. We suggest that you include practice in taking notes from listening as an integral part of your ongoing process of teaching note taking skills. It's crucial that you both provide repeated practice for your students and give them feedback about the quality of their notes and, thus, the effectiveness of their note taking skills.

UNIT XI SUMMARY: LISTENING AND TAKING NOTES

Much of what you need to learn for any class will be covered in the class itself. Taking *brief* notes in class can help you with this learning.

Use a note taking method with which you are comfortable when you start. Later on, you may want to use different methods in different situations. For example:

1. You can use the *outline* method for any kind of organized talk. You can also use *mapping with numbers* for an organized talk.
2. You can use the *mapping* method or *mapping with numbers* for taking notes during a less organized activity, such as a class discussion.

Be an *active* listener! Try to make sense of what the speaker is saying. Spend most of your time listening. Figure out what the main ideas are and write them down in words and phrases.

Remember: your notes are for you; take notes that make sense to you.

UNIT XII: PUTTING A BOOK TOGETHER

This unit is designed to help your students gain an understanding of the various parts of a standard textbook and what their uses are. Most students in the middle school years do not view their texts as sources or references. While they may have some awareness of the various parts of a text, like the glossary or the index, they tend not to use these sections of their books in an effective way.

This unit will involve your students in creating examples of the various parts of a text other than the body of the book. These activities can help your students to understand clearly the structure of a textbook and to begin to view their texts as tools which they can use for their own learning.

If your students are not at all familiar with the parts of a textbook addressed in this unit (title page, copyright page, table of contents, body or text, glossary, index, bibliography), you may want to introduce them to your students in a gradual way and employ the descriptions of these parts included in this unit as a review. For example, you could spend a few minutes at the beginning of class over a week or two teaching your students about these parts of a textbook.

Suggested Directons for Unit XII

We suggest that this unit be worked as a whole class project. It will require approximately two periods of class time.

Your students will be engaged in creating, sharing, and using parts of a "textbook." As you examine this unit, consider how you would prefer to have your students share the parts of the "textbook" which they create. Keep in mind that what your students create on the first day will be shared and used on the second day.

You may want to use one of the following methods:

a. Have your students write on large pieces of newsprint or a substitute which can be hung up in the front of the room.

b. Have your students write on the board if your classroom has sufficient board space.

c. Have your students write on ditto masters with which you can make copies after the first day of the unit.

DAY 1

1. Read the "Introduction" (page 70) aloud to your students. Discuss briefly. Then, have your students do Exercise I (page 70); give them three minutes to conduct their surveys.

   Approximate time: *5-8 minutes*

2. Have a student or students read "Title Page And Copyright Page" (page 70) aloud. Then, do Exercise II (page 71) as a class. Do parts A and B orally; write part C on the board or on newsprint. (If you are using dittoes, be sure to copy the title and copyright pages from the board onto a master, and make copies available to your students for the second day of this unit.)

   5-10 minutes

3. If your students could benefit from a review of the table of contents, the glossary, the index, and the bibliography, read aloud the descriptive sections about these textbook parts (pages 71-74), or have students read them aloud. Discuss briefly. (This step can be omitted if your students already have sufficient awareness of these textbook parts.)

   5-8 minutes

4. Divide your class into work groups as follows:

   a. Have about 20% of your students do Exercise III (page 71) *and* Exercise VI (page 74).

   b. Have about 35% of your students do Exercise IV (page 72).

   C. Have about 45% of your students do Exercise V (page 73).

   If you omitted direction #3 above, tell your students to read the descriptions above their assigned exercises carefully before they begin work.

   Have your students work on the assigned exercises. Tell them to follow the directions carefully. Also, give them the necessary materials for creating their group products, i.e. newsprint and magic markers, or chalk and board space, or ditto masters. Provide them with whatever instruction they need to make a product which can be easily shared.

   You will probably want to circulate among the groups and help them get started. You may also want to help them with the task of dividing the work within their exercises.

   20-30 minutes

5. Collect the finished group products at the end of the period.

DAY 2

1. Display or hand out the various parts of a "textbook" which your students have created. Have your students do Exercise VII (page 79) individually. Go over the exercise.

   10 minutes

2. Read the directions for Exercise VIII (pages 79-80) aloud. Go over the example orally. Then, have your students do the exercise. Go over the exercise; discuss for emphasis.

   10-20 minutes

3. Have your students begin Exercise IX (page 81) and finish the exercise for homework. You may also want to assign Exercise X (page 82) for homework for the same night or another one. Go over both exercises in class. Discuss the use and value of maps and graphs as parts of a textbook chapter.

ANSWERS FOR EXERCISES IN UNIT XII

Page 71: Exercise II (C)

You can use the specific information from the hm *Study Skills Program* (Level I). Or, use the Program only as a model and have your students invent information for the copyright and title pages; ask them to use their imagination and sense of humor!

Page 71: Exercise III

TABLE OF CONTENTS

I.	Introduction: A Brief History	page 6
II.	Two Classifications	page 7
III.	Old World Monkeys	page 7
IV.	New World Monkeys	page 7
V.	Proboscis Monkey	page 8
VI.	Spider Monkeys	page 9
VII.	Monkeys In Captivity	page 9

Page 72: Exercise IV

GLOSSARY

animal behaviorist: a scientist who studies animal behavior

breed: produce offspring or young

bushbaby: one kind of "pre-monkey," has large eyes which cannot move in their sockets

classification: category

continent: one of the grand divisions of land on the Earth, of which there are seven: Asia, Africa, Europe, North America, South America, Australia, Antartica

decline: getting smaller, moving towards extinction

endangered species: a kind of animal whose population has become so small that it is in danger of being wiped out

haunches: hips or hindquarters

hurdy-gurdy man: traveling musician who plays an accordian and has a monkey who begs coins for him

instinct: a kind of behavior in which an animal acts automatically; instincts are not learned but are part of the animal from birth

mammals: a class of animals which have backbones and nourish their young with milk

prehensile: adapted for seizing or grasping

primates: an order of mammals consisting of humans, apes, monkeys, and "pre-monkeys"

proboscis: a long, flexible snout or nose

tarsier: one kind of "pre-monkey," has large eyes which cannot move in their sockets

territory: an area of land which an animal lives in and will defend against intruders

tree shrew: the first "pre-monkey"

Page 73: Exercise V

INDEX

Bushbaby, 6
Colobus monkey, 10
Endangered species, 8
Guenons, 10
Howler monkey, 10
Hurdy-gurdy man, 9
Langur, 10
Macaque, 10
Mangabeys, 10
Marmoset, 10
Monkeys as pets, 9-10
New World monkeys, 7-9
Old World monkeys, 7-8
Owl monkey, 10
Pre-mon[illegible], 6-7
Probosci[illegible]onkey, 8, 10
Spider m[illegible]key, 9-10
Tarsier, 6
Tree shrew, 6
Uakari, 10
Woolly monkey, 10
Zoos, 10

Page 79: Exercise VII

1. No. There's no mention of what monkeys eat.
2. Answers will vary.
3. The "pre-monkey's" eyes do not move in their sockets.
4. *Chimpanzees* and *Monkeys And Apes* were both published in 1977.

Pages 79-80: Exercise VIII

Example: Chapter VII; table of contents

1. Yes; answers will vary; glossary
2. South America; index and body
3. Milwaukee; bibliography
4. Answers will vary; glossary
5. No; body
6. Page 8; index

Additional Suggestions

1. A good resource about how to "make books" is *Books For You To Make,* by Susan Purdy (Philadelphia: J. P. Lippincott, 1973).
2. Have your students create "book parts" for pieces of their own writing. Select a "book part" which would be a constructive addition to what they have written.
3. Develop worksheets which ask your students to use the various parts of a textbook in involving and challenging ways.

4. This unit is not designed to teach all of the map and graph use skills which your students will need to learn. Rather, the purpose of the "Additional Exercises" is to incorporate the use of maps and graphs into the activity of using a textbook so that your students can begin to see the value of these visual aids in their texts. You may want to develop your students' map and graph use skills further by using activities like the ones suggested below:

    a. Have your students make a map of an area they know well: the school, their neighborhood, their route to school, etc. When students have experience with mapping areas about which they have a concrete sense, they generally find it easier to conceptualize more abstract maps.

    b. Have your students make bar and grid graphs of their class heights. Then, ask them to find the average heights for girls and boys and graph that information. Have them put the statistics into percentages and make pie graphs.

    c. Give your students a paragraph which includes a lot of statistical information and a graph which conveys the same information. Have your students discuss why one might be easier to understand than the other.

UNIT XII SUMMARY: PUTTING A BOOK TOGETHER

You can use your textbooks to help you learn when you understand how the parts of a book fit together. Also, when you want to find out specific information, knowing the parts of a textbook and how to use them can save you time and effort.

The main parts of a textbook are:

1. The *title page* tells you the title of the book. It also tells you the author, the publisher, and where the book was published.
2. The *copyright page* tells you who owns the right to print the book and when the book was first printed.
3. The *table of contents* informs you about what the chapters are in the book and on what page each one starts. It can also help you to find out what main ideas are covered within the book.
4. The *body* or *text* of the book includes all of the written sections in each chapter.
5. The *glossary* is like a dictionary for new or unfamiliar words used in the book. Words in a glossary are listed in alphabetical order; each listing tells you the meaning of that word as it's used in the book.
6. The *index* is an alphabetical listing of specific names and ideas found within a book. Numbers of the pages where the names and ideas can be found are listed after the names and ideas.
7. The *bibliography* lists all of the references, the books and articles, which the author has used in writing the book.

UNIT XIII: SOLVE IT YOURSELF

In a very real sense, all study skills offer ways of solving problems. But the skill we call 'problem solving' is a key study skill in its own right; its use can help students to become more competent and confident learners.

'Problem solving' skill invoives the ability to address a perceived problem with a clear strategy for how one will try to find a helpful solution.

This unit will offer your students a method for effective problem solving and will give them practice in using this method. Of course, this unit can only provide an introduction to the area of problem solving. You may want to explore these skills in greater depth.

A few helpful sources are: Hudgins, Bryce B. *Learning and Thinking: A Primer for Teachers.* (Itasca, Illinois: F. E. Peacock Publishers, 1977); Feldhusen, John F. and Treffinger, Donald J. *Teaching Creative Thinking and Problem Solving.* (Dubuque, Iowa: Kendall/Hunt Publishing Co., 1977); De Bono, Edward *Children Solve Problems.* (New York: Harper and Row, 1974).

This unit will also engage your students in an experience of reading as a means of problem solving. If we can involve our students in reading texts and other sources as a way of solving learning problems, they will become more willing and able to use their texts effectively.

Suggested Directions for Unit XIII

1. Have your students sit in small groups of 3-5.
2. Ask your students to read the "Introduction" (page 84), or have a student or students read it aloud. Then, read the "Steps for Problem Solving" (page 84) aloud to your students; discuss and clarify as necessary.

   Approximate time: *5-10 minutes*
3. Have the groups work on the "Problem: Is The Earth Round Or Flat?" (pages 85-88). (If you feel that it's necessary, have your students read pages 85-86 and then discuss the problem as a whole class before they try to find solutions in small groups.)

   Be sure to give your students a specific time limit (15 or 20 minutes, for example) in which to work through the problem and decide on their two best possible solutions.

   15-25 minutes
4. Have a member of each group list the group's two best possible solutions on the board. Then, using a method with which you are comfortable, have your class select the two best suggestions from all those listed. (Do not evaluate the "correctness" of these solutions at this time. You'll have the opportunity to do that in the last part of this unit.)

   5-10 minutes
5. Read the directions for "Reading To Solve A Problem" (page 88) aloud to your students; ask your students to read "The Spinning Earth" (page 89) and answer the question below the passage. When they have completed this, discuss how the solutions offered in the passage compare with the ones which class members have developed. Also, discuss how well this problem solving method worked for the various groups.

   10-20 minutes

A CAUTIONARY NOTE

It's possible that your students may not be able to generate any solutions for this problem. If you find this to be the case, you may want to help groups that are struggling by giving them some clues.

It is also possible that your students may not find a great enough challenge in the problem in this unit. If you expect this response, you may want to substitute the problem suggested in the "Additional Suggestions" for this unit or a problem of your own making.

Additional Suggestions

1. You may want to use the problem below in place of or in addition to the problem given in this unit.
   a. Present your students with this problem:

      "You are a four foot tall pygmy who hunts elephants. The only weapon you have is a six foot spear. The African elephant is the largest living land mammal in the world. How do you manage to kill him?"

   b. Have your students follow the same steps as the ones included in the problem in this unit. You will need to provide your students with copies of the passage below for the final step in the problem solving process.

TODAY'S STONE AGE ELEPHANT HUNTERS

Some pygmies of the western Congo use a system of concealing their scent when hunting elephants. Few of these little jungle dwellers hunt elephants but those that do have chosen about the most dangerous way to secure food in today's world.

Hunting is done by a single man using a spear with a large metal spearhead and thick shaft. After taking the trail behind an elephant herd, the hunter pauses frequently to coat his skin with fresh elephant droppings for several days until he has lost all human scent.

Closing on the herd, the pygmy selects his prey—usually a young adult. He watches this animal until he is aware of its distinct habits—how often it dozes, eats, turns, wanders out of the herd, and other individual behavior.

Then he moves towards his huge prey, usually at midday when the herd is dozing while standing. The little hunter moves silently between the elephant's legs, braces himself and drives the spear up into the stomach area for several feet. The elephant snaps to alertness, screaming and trying to reach his diminutive attacker. Many pygmy hunters have lost their lives at this moment, but if the little hunter is fast enough he pulls out the spear to facilitate bleeding and ducks for safety.

Death does not come for several days and the hunter must follow his wounded prey until it stops. When the elephant falls, the pygmy cuts off the tail as proof of his kill and sets off for his village which may be several days away by now.

(This problem was developed by Richard and Joann Vacca and appears through their courtesy.)

2. Set up a science experiment for your students. However, instead of giving them the procedure, give them the necessary materials and the hypothesis and ask them to develop a procedure. If they are familiar with the experimental format, they will probably be able to improvise a procedure and generate some acute observations in this process.

UNIT XIII SUMMARY: SOLVE IT YOURSELF

When you want to solve a problem, try to use these five steps for problem solving:

1. Figure out what the problem is. Tell yourself exactly what the problem is.
2. Think of at least two or three possible solutions.
3. Examine the possible solutions, and pick the best one.
4. Try out your solution to see how well it works.
5. If your solution doesn't work, use one or both of the steps below:

    a. Try another one of your possible solutions from step #2.

    b. Do some research into the problem: then start again with step #2.

UNIT XIV: STUDYING AND TEST TAKING

This unit engages your students in examining their own study environment and behavior. It also introduces your students to a series of skills in answering the most common kinds of objective test questions.

The key to the first part of this unit is that people learn best in their own personal ways. Usually, however, little instruction in school is directed towards the discovery of various aspects of the student's own *learning style*. This unit offers the student a way to begin to learn about the characteristics of his or her own learning style by focusing on the student's preferred learning environment.

"Testwiseness" involves understanding the various kinds of test questions asked, what kinds of answers they require, and what thinking processes one can use to answer them most effectively. The second part of this unit is based on the assumption that a student who is "testwise" will be able to show what he or she has learned better than one who is not. As the purpose of testing is to determine what a student has learned, it seems only fair to help students understand how tests work so that they can accurately convey what they know to others.

Suggested Directions for Unit XIV

1. Read the "Introduction: Studying" (page 91) aloud, or have your students read it to themselves. Discuss briefly. Then, have your students do Exercise I (pages 91-92).

   Approximate time: *10-15 minutes*

2. Have your students do Exercise II (page 93). (You may want to instruct your students to start Exercise II when they have completed Exercise I.) When your students have finished Exercise II, discuss their ideas for a good study environment. (You may also want to discuss Exercise I at this time.) Have several students write their lists on the board and discuss. Or, have your students discuss their lists in small groups. Find out which characteristics of a good study environment are most generally accepted by your students and list these on the board. Perhaps a few students could design a poster about study environment using the ideas which the class has generated.

   10-20 minutes

3. Have students read the "Tips For Studying" (page 93) aloud. Briefly discuss each one.

   5-8 minutes

4. Read the "Introduction: Test Taking" (page 93) aloud, or have your students read it to themselves. Discuss briefly. Then, work through pages 94-96 as a whole class (read the introductory section about the kind of question aloud, discuss briefly, have your students do the exercise, go over the exercise). Or, have your students work through pages 94-96 on their own, reading the introductory sections and doing the exercises; then, go over each exercise and discuss.

   15-30 minutes

PLEASE NOTE: In this unit, we have used the term "good guess" in presenting methods for answering multiple choice, matching, and short answer questions. In discussing with your students what a "good guess" is, we suggest that you introduce them to the concept of an "informed guess," that is, a guess based on whatever usable knowledge you have about a question. Suggest to your students that whenever possible, they will want to make "informed guesses" when they need to guess. Also, you may want to remind them that if they have no basis for making an "informed guess," they will want to guess anyway, unless guessing is penalized.

ANSWERS FOR EXERCISES IN UNIT XIV

Page 94: Exercise III

1. F
2. F
3. F
4. F
5. T

Page 95: Exercise IV

1. D
2. D
3. C
4. B

Page 95: Exercise V

1. three
2. Thomas Jefferson
3. liquid

Page 96: Exercise VI

a. 6
b. 1
c. 2
d. 5
e. 3
f. 4

Additional Suggestions

1. The exercises in the first part of this unit offer your students only a beginning towards their learning about how they learn best. We suggest that you create other activities of this kind and involve your students in an ongoing experience of discovering more about their own learning styles.
2. Discuss the concepts of fact and opinion and how these concepts relate to multiple choice and true/false questions.
3. If you use other kinds of questions on your tests, involve your students in exercises like the ones in this unit so they can develop a "testwiseness" in relation to the kinds of questions that you use.
4. Ask your students to think about what questions might be on a test while they are preparing for the test. Announce a test for a specific day; then, ask your students to write some questions which they think they might be asked on the test; have your students hand in their questions before the test; give the test; after you've corrected the test and gone over it with your students, discuss the questions which they wrote.

   You can teach your students to use this self-questioning technique as a way of studying for a test.

UNIT XIV SUMMARY: STUDYING AND TEST TAKING

Your *study environment* can have a lot to do with how well you learn. Find out what kind of study environment works best for you. Then, do your studying in that kind of an environment.

When you understand how different kinds of questions work, you can often do better on tests.

1. True/false questions
   If the answer is partly false, mark it false. Watch out for "key words" like always, never, or only. These words can help you decide whether a statement is true or false.
2. Multiple choice questions
   Read the question, and see if you know the answer before you look at the choices. Then, read all of the choices and pick the *best* answer. If you're not sure about the answer, cross out the choices which you know are wrong; then, choose the best remaining answer. Make a good guess!
3. Short answer questions
   Read the statement carefully. If you don't know the exact answer, write down the best answer you can think of.
4. Matching questions
   Match the items you know first; then, cross them out. Make a good guess about the remaining items.